
ARCHÆOLOGICAL SURVEY OF INDIA

ANNUAL REPORT

1912-13

EDITED BY

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EXCAVATIONS AT TAXILA.

IN the following report on the excavations which I conducted at Taxila in 1913 and the spring of the following year, it is not possible to attempt a full and exhaustive description of all the monuments and antiquities which I was fortunate enough to bring to light. Such a description must be reserved for a special monograph on the subject, in which more adequate justice can be done to the wealth of new and valuable materials which this remarkable site is now yielding to the spade. For the present, I can do no more than give a succinct and, I hope, lucid account of the more important monuments and antiquities that have been unearthed, in the hope that the light which they throw on historical and archæological problems may not entirely be hidden until the excavations are brought to a close—an event which is not likely to happen for many years to come—and the results published in their final and complete form.

Topography of the site.

The remains of Taxila are situated immediately to the east and north-east of Saraikala, a junction on the railway twenty miles north-west of Rawalpindi. The valley in which they lie is a singularly pleasant one, well-watered by the Haro river and its tributaries, and protected by a girdle of hills—on the east and north by the snow-monuments of Kashmir, on the south and west by the well-known Margalla range and other lower eminences. This position on the great trade route which used to connect Hindustan with Central and Western Asia, coupled with the strength of its natural defences, the fertility of its soil and a constant supply of good water, readily account for the importance of the city in early times. Arrian speaks of it as being a great and flourishing city in the time of Alexander the Great, the greatest, indeed, of all the cities which lay between the Indus and the Hydaspes (Jhelum).[1] Strabo tells us that the country round about was thickly populated, and extremely fertile, as the mountains here begin to subside into the plains,[2] and Plutarch[3] remarks on the richness of the soil. Hiuen Thsang,[4] also, writes in a similar strain of the land's fertility, of its rich harvests, of its flowing streams and of its luxuriant vegetation.

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[1] Bk. V, Ch 3. Cf. McCrindle, *The invasion of India by Alexander the Great*, p. 92.
[2] Bk. XV, Ch. 28. McCrindle, *Ancient India*, p. 33.
[3] Ch. LIX.
[4] Watters, *On Yuan Chwang*, Vol. I, p. 240.

A complete survey of the whole site of Taxila and its remains is now being carried out, and I hope that in my next Report it will be possible to publish an accurate and large scale map of this interesting tract of country. Meanwhile, in describing the topography of the site I must have recourse to the rough sketch plan on Pl. LVII of the second volume of Gen. Cunningham's Reports. It will be seen from this plan that there is a ridge of hills stretching from north-east by east to south-west by west across this area, the western termination of which is called Hathiāl. This ridge of hills is a rocky and precipitous spur of limestone formation, which projects into the valley from the mountains on the East, and divides the eastern part of it into two halves. The northern half is now-a-days singularly rich in crops, being watered by numerous artificial canals taken off from the higher reaches of the Haro river; the southern half is less fertile, being intersected by many deep ravines and broken by bare stony knolls, on many of which are the ruins of old time *stūpas* and monasteries. Through this part of the valley and skirting the western foot of the Hathiāl hill runs the Tabra or Tamra Nala, which is manifestly identical with the stream called Tibernabo, Tiberoboam, or Tiberio-potamos referred to by classical authors.[1] Through the northern half of the valley flows the Lundi Nala, another tributary of the Haro river, which like the Tabra Nala now runs in a deep bed, but in old days, no doubt, was nearer the surface.

Bir Mound.

Within this valley and within three and-a-half miles of each other are the remains of three distinct cities. The southernmost of these occupies an elevated plateau, known locally as the Bir Mound, between the recently opened railway from Saraikala to Havelian and the Tabra Nala, above the bed of which it rises to a height of between 60 and 70 feet. From north to south this plateau measures 3,630 feet and from east to west at its widest point 2,210 feet. On its western and southern sides its boundaries follow a fairly regular line, but on the east and north they sweep along the edges of the bays and bluffs above the Tabra Nala, and in some of these bays, where the soil has been washed down into the ravine below, it is no longer possible to trace with accuracy the original position of the walls. According to local tradition, the Bir Mound is the most ancient of all the sites at Taxila, and this tradition is fully confirmed by the discoveries which I have made on the surface of the mound. Gen. Cunningham was of opinion that this city was still in occupation at the time of Hiuen Thsang's visit in the 7th century A.D., but this opinion appears to have rested on no surer ground than his own speculations as to the identity of a ruined *stūpa* in the region of Babarkhana with the *stūpa* of the 'Head gift' described by the Chinese pilgrim, which, as we shall presently see, was quite erroneous. It is certainly not borne out by existing remains, which indicate that the Bir Mound was occupied as a city many centuries prior to the coming of the Greeks, and that the capital was transferred by them in the early part of the 2nd century B.C. to the area now known as Sirkap.

Sirkap.

This second city of Sirkap, of which almost the entire outer wall is still clearly visible, occupies the western spurs of the hill of Hathiāl, together with a well-defined plateau on their northern side. On the western edge of this plateau the city

[1] Cf. Sylvain Levi, *J. A.*, Tome XV (8me Serie), pp. 236-7, and McCrindle, *Ancient India*, pp. 342-3.

wall has an irregular alignment broken by several angles and recesses, but on the north and east it is quite straight and from the south-east corner of the plateau proceeds in the same straight line up the steep side of the northern ridge of Hathiāl, then drops across a valley, traverses a second ridge and depression, and so ascends to the summit of the third and highest ridge on the south. From this point it turns in a westerly direction and descends the rocky edge of the ridge to its western corner; after which it takes a sharp turn to the north, and bends west again around a prominent bluff above the Tabra Nala, and so returns north along the western face of the plateau. Within its circuit the city wall thus takes in three rocky and precipitous ridges of the Hathiāl spur, besides an isolated flat-topped hill which rises in a gradual slope from the bluff above referred to, and the whole of the level plateau to their north. The length of this wall is approximately 6,000 yards, its thickness varying from 15′ to 21′ 6″. Gen. Cunningham has stated[1] that it is built entirely of squared stone, but this statement is without foundation. Throughout its whole length both the core and facing of the wall are composed of rubble stones of no great size or stability, the construction being in all respects similar to that of other structures of the Greek and Śaka-Pahlava epochs, and, like them, liable to fall rapidly to ruin. The outer curtain of the wall is strengthened by bastions spaced at irregular intervals and, to judge from such remains as are visible, rectangular in plan.[2]

The position and number of the gateways with which this wall was pierced are not easy to determine. Gen. Cunningham states that there were seven, namely: two in each of the northern, western and eastern walls, and one in the southern; but it can safely be affirmed that of the seven gateways shown in this plan, five at least were non-existent. In the northern wall there is one gateway and one only, opposite the end of the main street, which has now been exposed to view running north and south through the heart of the lower city. On the eastern side of the plateau a gateway may have existed at or near the point indicated by Gen. Cunningham, though no traces of it are now evident. On the other hand, the existence of ancient houses immediately inside the supposed gateway in the opposite or western wall proves conclusively that there could have been no road or gate at this point; and it is equally evident that there were no gateways in the same wall to the north of this. nor yet among the Hathiāl ridges on the east or south as supposed by Gen. Cunningham. Indeed, apart from the two mentioned above, the only other gate of which the existence is reasonably certain, is one in the deep bay on the western side of the city, where the Tabra Nala sweeps round in a sharp bend beneath the fortifications, namely, immediately north of the bluff alluded to above and a little south of the modern roadway which here passes through the city. This gateway, as well as the line of the road passing through it, has now been effectually obliterated by a high modern retaining wall constructed to prevent the soil being washed down from the interior of the walls. But it is said to have been quite visible until a few decades ago; and that there was once an important entrance to the city at this point

[1] *A. S. R.*, Vol. II, p. 119.

[2] It is noteworthy that some of the bastions are further protected by sloping buttresses which were apparently added at a later date.

seems manifest from the interior defences, which are designed to flank the road passing through this gateway on both sides for a distance of 170 yards within the gate.[1]

Judging by its position and configuration, it seems probable that the isolated flat-topped hill referred to above was the real Akropolis of the ancient city of Sirkap; but it is evident that the whole of the area comprised within the Hathiāl ridges and between them and this hill was also specially fortified to serve as a place of refuge in case of siege. To this end an inner line of fortifications appears to have been carried along the north side of the Akropolis as well as along the base of the northern ridge of Hathiāl, the only access to the interior fort being provided by a gateway in the depression between the two hills. Gen. Cunningham imagined that this gateway was directly opposite to the northern gate of the city and connected with it by a straight street leading through the middle of the lower city, but excavations in this part of the site show that his ideas on this point were incorrect.

Kachcha Koṭ.

Outside the northern wall of the Sirkap city was a suburb, now known as the Kachcha Koṭ from the fact that it is defended by earthen ramparts only. This suburb has a circuit of rather more than a mile and a quarter, and is enclosed on the west in a bend of the Tabra Nala, above which its fortifications rise to a height of about 40 feet.

Sirsukh.

The third city is that of Sirsukh, situated still further to the north, on the opposite side of the Lundi Nala. This city appears to have been built by the Kushāns, probably during the reign of Kanishka. Its plan is almost rectangular and the circuit of the walls not far short of three miles. The walls, which are relatively well-preserved along part of the southern and eastern sides, are of massive construction, 18′ 6″ in thickness and protected by circular[2] bastions on their outer side. Cunningham states that the walls are built of squared stones, and that the towers are square and spaced at intervals of 120 feet; but all three statements are erroneous. The masonry of the walls is of the large diaper type which came into vogue in the early Kushān period; the bastions are circular, and the intervals between them measure 90 not 120 feet. Inside the city are three modern villages, Mirpur, Thupkia and Pind, placed on the remains of ancient buildings, which are still peeping out from the débris among the houses. The style of construction in these buildings is later than that of the walls, and proclaims them to belong to the third and fourth centuries of our era.

Dharmarājikā Stūpa.

In addition to these three city sites—the Bir Mound, Sirkap and Sirsukh—there are many other detached monuments, mainly Buddhist *stūpas* and monasteries, scattered about over the face of the surrounding country. Such monuments are specially numerous in the southern half of the valley, where they occupy most of the barren hillocks alongside the Tabra Nala. Conspicuous among these is the imposing Dharmarājikā *stūpa*, known locally as the "Chir" or "Split" Tope, from the great cleft which explorers have made through its centre. Then, on the northern ridge of

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[1] These defences are formed, on the south of the road, by the straight line of fortifications along the north side of the Akropolis; on the north of the road, by another parallel line of fortifications some 65 yards distant.

[2] Not square, as shown by Gen. Cunningham.

Hathiāl and partly covering the old city wall are the ruins of another great *stūpa*, which Cunningham wrongly assumed to be a military tower connected with the city's defences, but which, as its masonry proves, was not erected until long after the city wall had fallen to decay. At Jandiāl, again, a little to the north of the Kachcha Koṭ, the plain is broken by two lofty mounds, of which one at least conceals the remains of a spacious temple dedicated, there is reason to believe, to fire-worship; and a little beyond these, again, are two smaller Buddhist *stūpas*, while still further north a conspicuous landmark is furnished by the lofty Bhalaṛ *stūpa*, which occupies a prominent position on the last spur of the hills that bound the valley of Taxila on the north. Besides these, there are, dotted here and there throughout the valley or on the hills to the east, many other eminences of ancient days, but the mounds I have mentioned comprise all those which have yet been excavated, and I need not, therefore, add further to the list.

Kunāla Stūpa.

Jandiāl.

Bhalaṛ Stūpa.

History.

Notwithstanding the power and wealth of Taxila in ancient times, the information we possess regarding its history is singularly meagre, being drawn in the main from the accounts of the Greek or Chinese writers, or laboriously pieced together with the help of coins and a few rare inscriptions. The foundation of the earliest city goes back to a very remote age, at least to the second if not to the third, millenium before our era. In the Mahābhārata it finds mention as the spot where King Janamējaya performed the great snake sacrifice, and where, while the sacrifice was being made, the whole of the famous epic was recited. Later on—about the beginning, that is to say, of the 5th century before our era—it was probably included in the Achaemenian kingdom of Persia; for the inscriptions of Darius at Persepolis and on his tomb at Naksh-i-Rustam make mention of a new Indian satrapy, which was regarded as the richest and most populous in the Empire, and which being distinct from Aria, Arachosia and Gandaria, may be assumed to have comprised Sind and a considerable part of the Panjab east of the Indus.[1] That Taxila at this time and during the centuries immediately following enjoyed a great reputation as a University town famous for the arts and sciences of the day, is evident from numerous passages in the Jātakas; but, apart from this fact, virtually nothing is known of its history prior to the invasion of Alexander the Great. That monarch descended on the Panjab and received the submission of Taxila in the spring of 326 B.C., halting there for some weeks preparatory to his attack on Porus. From the extant accounts of Alexander's expedition, based on the writings of his own companions or contemporaries, we learn that the city was then very wealthy, populous and well governed, and that its territories extended from the Indus to the Hydaspes. We learn, too, that polygamy and the practice of *sati* were in vogue; that girls too poor to be wedded were exposed for sale in the market place; and that the bodies of the dead were thrown to the vultures. At the time of Alexander's invasion, the reigning king Āmbhi, known to the Greeks as Omphis or Taxiles,[2] was at war not only with the powerful kingdom of Porus, on the further side of the Jhelum, but with the neighbouring Hill State of Abhisāra, and it was no doubt in the hope of securing Alexander's help against these foes, that he sent an embassy to wait upon the

[1] Cf. V. A. Smith, *Early History of India*, p. 32

[2] Manifestly an hereditary title.

Macedonian at Ohind and led out his troops in person from Taxila to place them at the service of the conqueror, afterwards entertaining him with lavish hospitality at the capital and providing a contingent of five thousand men for the expedition against Porus. In return for these and other friendly acts, Āmbhi was confirmed in the possession of his own territories and rewarded by the accession of new ones, while his position was further strengthened by a reconciliation with Porus.

The Macedonian conquest of India was short-lived. In 317 B.C. Eudemus, the Greek Governor, withdrew from the Indus valley with all the forces he could muster to assist Eumenes against Antiochus, and about the same time, or perhaps even earlier, Chandragupta drove out the Greek garrisons east of the Indus, and proceeded to incorporate Taxila and the other states of the Panjab into the Empire of Magadha. Then followed, about 305 B.C., the transient and ineffective invasion of Seleucus Nicator, who sought to reconquer the lost possessions of Alexander, but was reduced to making a hasty and humiliating peace with Chandragupta, under the terms of which all the old Macedonian provinces as far as the Hindu Kush were formally ceded to the Indian Monarch.[1] To the states of the Panjab the iron hand of Chandragupta must have proved more oppressive than that of the Greeks before him, and, when his son Bindusāra succeeded to the throne of Magadha, Taxila threw off the Mauryan yoke and was not seemingly brought to submission until the Crown prince Aśoka himself appeared before its gates. According to the *Vishṇu Purāna* Aśoka afterwards ruled here as Viceroy on behalf of Bindusāra, and during his father's and his own lifetime he appears to have maintained the Mauryan power throughout the North-West no less efficiently, though perhaps less harshly, than did his grandfather Chandragupta. To him no doubt was subsequently due much of the strength which Buddhism gained in this part of India.

Soon after Aśoka's death, which occurred about the year 231 B.C., the empire of Magadha began to break up, and Taxila along with other outlying provinces was able once again to assert her independence, only to fall an easy prey to fresh Greek invaders from Bactria, whom the decline of the Mauryan power invited eastward. The first of these invaders to reach Taxila was Demetrius, son-in-law of Antiochus the Great (c. 190 B.C.), who carried his arms successfully through the Kabul valley, the Panjab and Sind. Twenty years later came Eucratides, who wrested first Bactria and then part of his Indian possessions, including Taxila, from Demetrius. From these two conquerors there sprang two rival lines of princes, who continued in India the feud which had been started in Bactria,[2] encroaching from time to time upon each other's territories. Among the kings who ruled over Taxila, Apollodotus and Menander apparently belonged to the house of Demetrius, Antialcidas to that of Eucratides.[3] Of the many other rulers in the Punjab and North-West our knowledge at present is too meagre to determine which of them ruled at

[1] The hasty conclusion of this peace, under which Seleucus Nicator received only 500 elephants in exchange for so vast a tract of country in Ariana, was probably due no less to the danger with which he was threatened by Antigonus in the West, than to the unexpectedly strong opposition of Chandragupta, though Seleucus must have recognised the impracticability of ever effectively holding the disputed provinces.

[2] Cf. Rapson, *Ancient India*, p. 128.

[3] Op. cit., p. 133. Other authorities take Apollodotus to be a son of Eucratides. Cunningham, *Numismatic Chron.*, 1869, pp. 241-3.

Taxila and what connexion, if any, they had with the one or the other of these two houses.

The rule of the Greeks at Taxila had endured for little more than a century, when it was swept away by invading hosts of barbarians from the west. These barbarians were the Scythians or Śakas, as they were known in India, who had long been settled in the Parthian Province of Seistan and had there mingled and intermarried freely with the Parthian population. From Seistan they overran Arachosia and the neighbouring countries, and thence passed across the Indus to the conquest of the Panjab. In Arachosia one section of these invaders remained and established its supremacy under the leadership of a Parthian named Vonones; while another section under the Śaka chief Maues, pressed eastward and conquered the kingdom of Taxila. Maues appears to have risen to power in Arachosia about 95 B.C. and to have reached Taxila some ten or fifteen years later. He was succeeded in or about 58 B.C. by Azes I, who had been intimately associated with the family of Vonones in the Government of Arachosia, and was in fact perhaps as much a Parthian as a Śaka. Though little is known of Azes I, there can be no doubt that his reign was a long and prosperous one, and it is probable that he was responsible for extending and consolidating the Śaka power throughout North-West India as far as the banks of the Jumna. In the administration of his dominions he adopted the old Persian system of government by Satraps, which had long been established in the Panjab, and this same system was continued by his successors, Azilises and Azes II, whose local satraps at Taxila and Muttra[1] were also of the Śaka race and connected with one another by close family ties.

On the death of Azes II, the kingdom of Taxila and Arachosia were united under one rule by the Parthian Gondopharnes, the fame of whose power spread to the Western world and who figured in early Christian writings as the potentate to whose court St. Thomas the Apostle was sent. This union of the two kingdoms took place about the third decade of our era and may be presumed to have been a peaceful one. After its achievement Gondopharnes proceeded to annex the Kābul valley, overthrowing the Greek principality in that region and driving out the last prince Hermaeus. But there could have been little cohesion in this empire of Gondopharnes; for no sooner was his personal authority removed than the satraps of the various Provinces asserted their own sovereignty. Abdagases, the nephew of Gondopharnes, took the Western Punjab; Orthagnes, and after him Pakores, Arachosia and Sind; and other parts of his dominions fell to other princelings, among whom were Sasan, Sapedanes, and Satavastra, whose coins I have discovered for the first time at Taxila.

It was during the Indo-Parthian supremacy, probably in the year 44 A.D., that Apollonius of Tyāna is reputed to have visited Taxila. According to his biographer Philostratus the king then reigning at Taxila was named Phraotes, who was independent of Vardanes the Parthian king of Babylon, but powerful enough to exercise suzerain powers over the satrapy of Gandhāra.[2] Approaching Taxila from the north-west, Apollonius halted at a temple in front of the wall, which he

[1] Liaka-Kusulaka, Pātika, Rājūvula, and Śoḍāsa.

[2] It is worthy of remark that Phraotes found it necessary to pay subsidies to the wilder tribes on his frontiers in order to keep them quiet.

describes in some detail, and which, as we shall presently see, may well be identical with the temple at Jandiāl. The city itself, *viz.*, the city of Sirkap, was about the same size as Nineveh and fortified like the cities of Greece on a symmetrical plan.[1] The streets were narrow and irregular like the streets of Athens, and the houses had the appearance of being one-storied, but had in reality basement rooms underground. Inside the city was a temple of the Sun and a royal palace, the latter of which was distinguished by its simplicity and lack of ostentation, very different from the splendour which Philostratus had seen at the court of Babylon.

The credibility of the story of Apollonius as related by Philostratus has been reasonably questioned by modern critics, and there is no doubt that there is much fiction in it mingled with the truth. On the other hand, there is little in the account of Taxila which is not borne out by what we know of the history of those times, while some details find remarkably strong corroboration in my own recent discoveries. The fact appears to be that Apollonius did journey at any rate as far as Taxila, and that Philostratos had access to the notes of his companion Damis. These notes were probably correct so far as his own personal observations went, but coloured by hearsay stories related to him ; and it is likely that other 'travellers' tales' were culled by Apollonius from earlier Greek writers in order to enliven his narrative.

To revert, however, to the history of Taxila. The opportunity of recovering his lost kingdom which the dismemberment of the Indo-Parthian Empire offered to Harmaeus was not lost upon him. After being driven from Kābul, he appears to have formed an alliance with Kujūla Kadphises, the powerful chief of the Kushāns, and with his help to have won back Kābul and afterwards to have combined with him in invading Gandhāra and Taxila. The chronology of this period is very uncertain, but it is probable that Kujūla Kadphises was succeeded in the third quarter of the 1st century by Wima Kadphises, who consolidated and enlarged the empire which his predecessor had won. To about this period belong the coins of the nameless ruler commonly known as Sōtēr Megas, who may have been a successor of Wima Kadphises.[2] Then followed, in the second century of our era, the great and powerful Kanishka, the most famous of all the Kushāns, and after him Huvishka and Vāsudeva. Kanishka made his capital at Purushapura, the modern Peshawar, and extended his conquests over a wide area from Central Asia to the borders of Bengal, and it is probable that this empire was maintained intact by his immediate successors. The death of Vāsudeva probably occurred in the first half of the 3rd century A.D., and from this time forward the Kushān power gradually declined, though it survived in the Panjab until the invasion of the Huns in the 5th century of our era.

In the year 400 A.D. the Chinese pilgrim Fa Hien visited the Buddhist monuments of Taxila, but unfortunately has left us no particulars about them. From his accounts of other places in this part of India, however, it is evident that at the time of his pilgrimage the great Buddhist sanctuaries of the North-West were still

[1] The words τετειχίσθαι δὲ ξυμμέτρως are translated by Conybeare "fairy well fortified," but this can hardly be the meaning here.

[2] There seems to me to have been a break between the reigns of Kadphises II and Kanishka.

relatively vigorous and flourishing; and it is no less evident from the condition in which they have been unearthed, that the monuments of Taxila were wantonly and ruthlessly devastated in the course of the same century. This work of destruction is almost certainly to be attributed to the hordes of barbarian Huns, who after the year 455 A.D. swept down into India in ever increasing numbers, carrying sword and fire wherever they went, and not only possessed themselves of the kingdom of the Kushāns, but eventually overthrew the great Empire of the Guptas.

From this calamity Taxila never again recovered, and when Hiuen Thsang visited it in the 7th century, he found it had become a dependency of Kashmir, that the local chiefs were at feud with one another, and that most of the monasteries were ruined and desolate. Of the Buddhist edifices which Hieun Thsang saw and described in the vicinity of the city, two are still easily recognisable.[1] One of these is the Bhalaṛ *stūpa* already alluded to, which he says was built by Aśoka on the spot where Tathāgata cut off his own head as an act of charity, and where a little before Hiuen Thsang's own time a woman had been miraculously cured of leprosy. The other is the *stūpa* on the north side of the Hathiāl ridge, which was likewise said to have been reared by Aśoka in commemoration of the spot where his son Kunāla had his eyes put out through the guile of his step-mother. Both these *stūpas* are now in process of excavation and will be described at length in a future report.

Modern explorations.

Of the exploration of the remains at Taxila up to the time when the present operations were started, there is little to chronicle. Like most ancient sites in this part of India, it was long subjected to the depredations of amateur archæologists or treasure-seekers. Among the former were Major Pearse, Major Cracroft, Deputy Commissioner of Rawalpindi, and Mr. Delmerick. Of the latter one of the worst offenders was a *bhisti* of the village of Shāh Ḍheri, named Nur, who in the fifties and sixties of last century seems to have made his living by opening small *stūpas* in the neighbourhood and disposing of their contents to Government officials or antiquity dealers. He it was who discovered an inscribed gold plate in one of the *stūpas* of Bābarkhāna and despoiled many other structures of their relics. It was not, however, until 1863, when Gen. Cunningham turned his attention to the site, that its identity with the ancient Taxila or Takshaśilā was established. This identity, which Gen. Cunningham had first surmised on the strength of the topographical indications given by ancient writers, was confirmed by the discovery on the part of some villagers of a stone vase in one of the *stūpas*[2] near Shāhpur, the inscription on which records that the *stūpa* in question had been erected at Taxila. Gen. Cunningham's own explorations, which were carried out in the cold seasons of 1863-64 and 1872-73, were limited to mere superficial trenches and pits near the north-east corner of the city of Sirkap, and in some of the isolated mounds on Hathiāl, at Jandiāl, Mohra Maliār and Seri-ki-Pind. The only discoveries of any consequence made by him were two temples of inconsiderable size near the village of Mohra Maliār,[3] one of which was remarkable for the Ionic columns with which it was adorned. The results of these

[1] Cunningham made the mistake of supposing that the city which Hiuen Thsang visited was situated on the Bir Mound instead of at Sirsukh. Hence his failure to identify the other monuments described by the Chinese pilgrim.

[2] No. 13 of Gen. Cunningham's plan in *A. S. R.*, Vol. II, pl. LXIII.

[3] *A. S. R.*, Vol. V, pp. 68-73 and plates XVII-XIX.

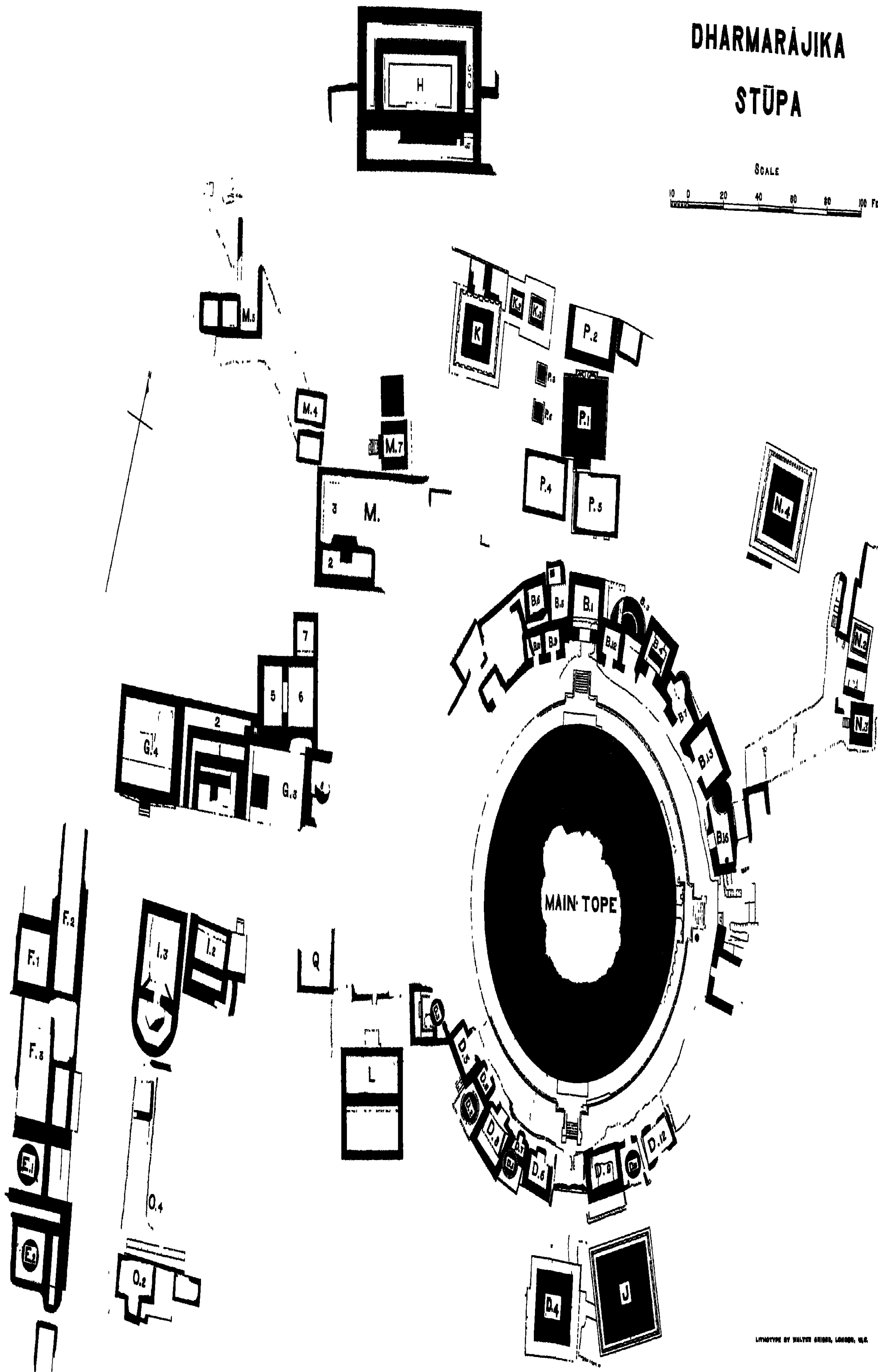
operations are embodied in Gen. Cunningham's reports for the years 1863-64 and 1872-73. Since the latter date further spoliation among these historic remains has been effected by neighbouring villagers, and numerous antiquities from here have found their way into the hands of the dealers of Rawalpindi. In no case has there been any system or purpose other than that of treasure seeking in these haphazard excavations, nor has any record of them been preserved.

Dhamarājikā Stūpa.

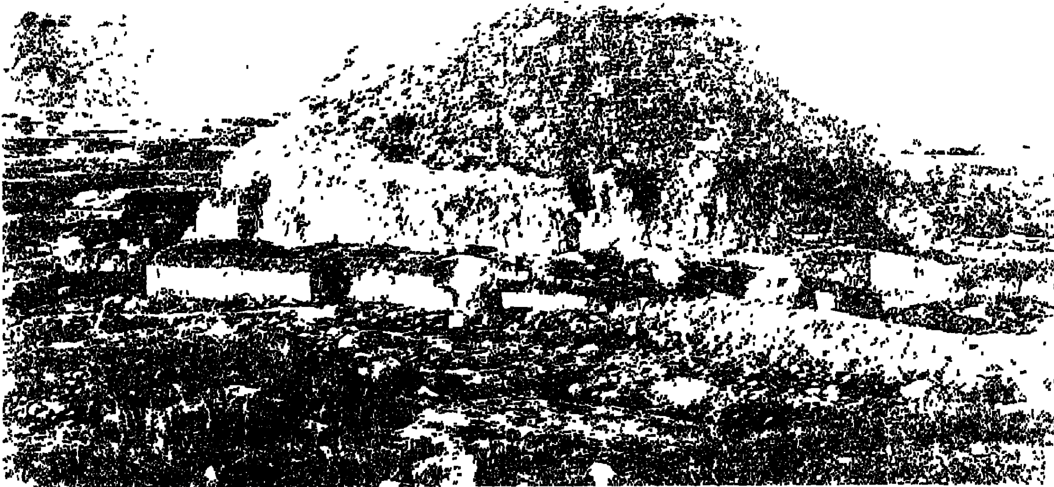
In the following description of my excavations I shall start with the *Dharmarājikā stūpa,* then proceed over the ridge of Hathiāl into the city of Sirkap, thence to Jandiāl and finally to the Bir Mound. The plateau on which the *Dharmarājikā stūpa* stands rises between 60′ and 70′ above the river bed and is mainly a natural formation. Prior to the spot being occupied by a Buddhist establishment, it appears to have been the site of a village, the remains of which are traceable at various points below the Buddhist structures. To this early stratum of habitation belongs a collection of 28 coins of the Greek king Zoilus which I unearthed below the foundation of the building H, to which I shall refer anon. The Great *Dharmarājikā stūpa,* which stands on the centre of the plateau, is now much ruined—so much so that Sir Alexander Cunningham affirmed that nothing was left of its outer casing. In this, however, he was wrong; for on excavating around its base I found that the facing on the north and south sides was relatively well preserved, and round about it I have brought to light a large number of other interesting structures including *stūpas,* chapels and monastic quarters (Pl. I), which, extending as they do over a period of at least four centuries, furnish us with important data for the history of local architecture. Thanks, also, to the coins and other minor antiquities found in association with them, they help us materially towards the solution of many chronological problems connected with this period of ancient history.

The main structure.

The main structure, as now exposed, proves to have had a circular base with a flight of steps approaching the berm at the four cardinal points, the best preserved of which (Pl. III *a*) is on the north side. The core of the *stūpa* is of rough rubble masonry, strengthened by walls, 3′ 2″ to 4′ 9″ in thickness, radiating from the centre (Pl. II *a*). These construction walls stop short above the berm of the *stūpa,* instead of being carried down to its foundations, and it is obvious that they belong to the subsequent reconstruction of the fabric which took place probably during the Kushān epoch. The outer facing is of ponderous limestone blocks with carefully chiselled *kankar* stone let in between them for the mouldings and pilasters, the whole having been once finished with a coating of lime plaster and paint. All that remains of this decoration consists of base mouldings and a series of pilasters at intervals of 4′ 6″ from centre to centre. The continuous base mouldings around the *stūpa* as well as the mouldings of the individual bases of the pilasters are of simple form (Pl. II *b*), earlier in type than the mouldings higher up on the facing above the berm. The capitals of all the pilasters which have been exposed are too decayed for their design to be made out with certainty. The ornamental stone carving on the face of the *stūpa* above the berm is best



PLAN OF EXCAVATIONS AT DHARMARAJIKA STUPA.



a. DHARMARAJIKA STUPA: VIEW FROM NORTH-EAST.



b. DHARMARAJIKA STUPA: BASE AND STEPS ON NORTH.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

preserved on the eastern side (Pl. III *b*). Its most distinguishing features are the boldness of its mouldings and the design of its niches, which are framed alternately by trefoil arches or doorways with sloping jambs and divided one from the other by Corinthian pilasters. In contrast with the facing of the berm below, which is composed of *kañjūr* and limestone mixed, the facing above the berm is wrought entirely in *kañjūr*. The same type of decoration is also found on smaller *stūpas* on this site belonging to the 3rd and 4th centuries A.D. Apparently, the original *stūpa* was built in the time of the Śaka rulers, probably about the middle of the 1st century B.C. The present facing of the berm, however, was not added until a century or more later, and the face decoration above not until about 300 A.D. In this connexion it will be observed from the plan that the additions above the berm made at the last renovation leave little space for walking around the berm. It should be added that the limestone masonry employed in the latest repairs is of the semi-ashlar and semi-diaper type which, as we shall presently see, came into fashion at the close of the 2nd century of our era.

Of the minor antiquities found in the *pradakshiṇa* passage, the only ones of interest were some Gandhāra sculptures, specimens of which are detailed below. These sculptures may have served to decorate the face of the *stūpa* before its second restoration. They were lying on the floor of the *pradakshiṇa* passage to the east of the *stūpa*, and had unquestionably been buried in the débris there before the restoration in question took place.

(1) Garland bearing figure, in relief, on lotus pedestal. 6½″ high. (Pl. VII *a*, 1.)

(2) Male figure (? Bodhisattva), in relief, seated cross-legged on lotus pedestal. Height 4½″. Right hand raised, holding garland. Left arm broken. Halo behind head. Wears necklace and ear ornaments. (Pl. VII *a*, 3.)

(3) Standing Buddha in (?) *abhayamudrā*, 3′ 1″ high. Legs, below knees, right hand and most of halo missing. The right hand was carved separately and attached by dowels to forearm. (Pl. VIII *a*.)

(4) Bodhisattva (? Śākyamuni) standing beneath umbrella canopy in *abhayamudrā*. Height 3′ 6″. Right foot missing, face and hands disfigured. Wears *dhotī* and scarf over left shoulder, garland, necklace and ear ornaments. Head-dress crowned by lotus springing from forehead. Halo behind head in low relief. To right and left, above shoulders, two attendant figures, much defaced. The one to right (? *Vajrapāṇi*) holds thunderbolt. To proper left of Bodhisattva stands small female figure robed in *sāṛī* and wearing garland, necklace, bracelets and anklets. Face and left arm mutilated. (Pl. VIII *c*.)

Small circular stūpas around the main structure.

The main or *Dharmarājikā stūpa* was, it need hardly be said, the first of the Buddhist structures to be erected on the plateau. At the time when it was constructed, the plateau around was levelled up and covered with a layer of grey river sand with a floor of lime plaster above. On this floor or on the débris which accumulated immediately above it there was subsequently built, in a ring around it, a number of small circular *stūpas*. Several of these I have unearthed, mainly on the north and south sides. Among them are those numbered B^3, D^1, D^2, and D^{10} in plan. These small *stūpas* are constructed of rough rubble cores faced with square *kañjūr*

blocks, the only existing decoration being a simple *cyma-recta* base moulding (Pl. IV *a* and *b*). In one of these *stūpas*, B³, I found at a depth of about 5′ below the base a relic casket of steatite with a miniature gold casket inside, containing a fragment of bone and a number of pearls, carved cornelians and other stones, but unfortunately there were no coins or other indication of its date. The steatite casket (Pl. VII *c*) is 7½″ high and has been well turned on the lathe; it is adorned with shallow incised lines round its body and provided with a handle on the lid in the shape of a miniature casket.

Circle of small chapels.

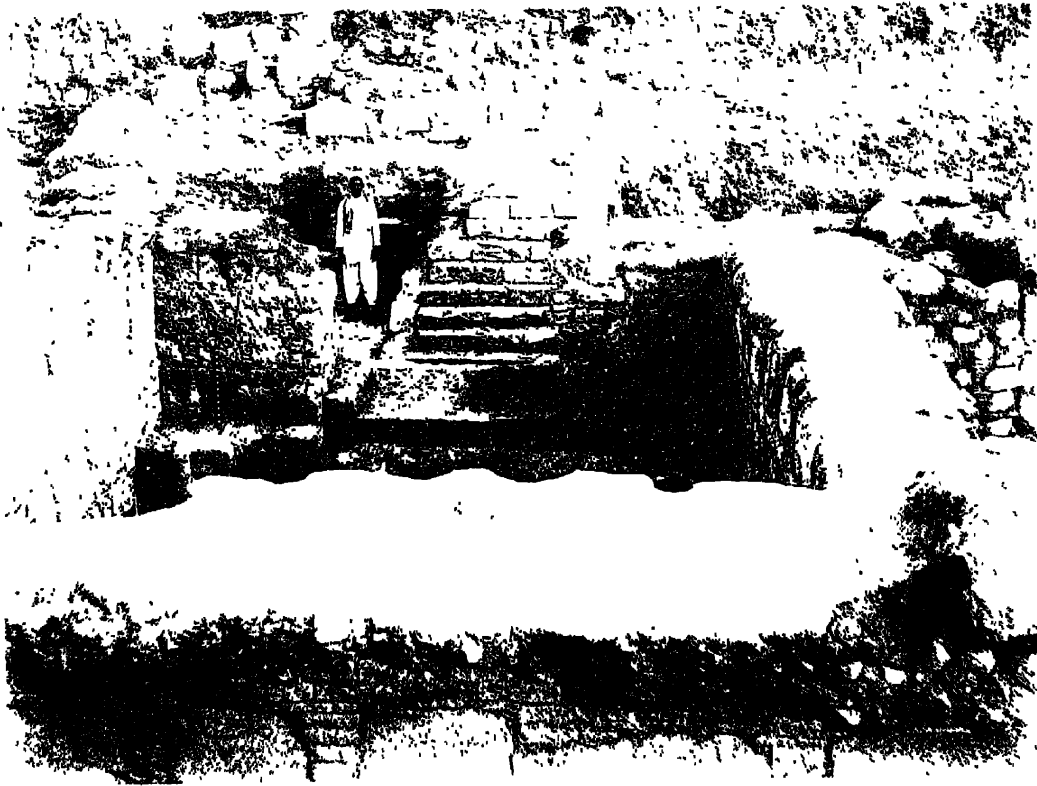
The next stage of building around the great *stūpa* is marked by the erection of gateways opposite the steps at the four cardinal points, and of a circle of small chapels which are similar in plan as well in purpose to those at Jamālgaṛhī in the Frontier Province. In Burma, it is against the Buddhist principle ever to destroy a *stūpa* or any other work of merit, and it may be presumed that the same practice was followed among the Buddhists in ancient India. Accordingly, when these chapels were built, the small *stūpas* then standing, although much decayed, were suffered to remain, the ground between them being partially filled in with débris and the walls of the new chapels carried over their tops. For the accumulation of the débris on the original floor around the main structure and for the construction of the ring of small *stūpas* we must allow at least five or six decades, and, as the latter had fallen partly to decay before the new chapels were erected over them, it is fairly certain that the latter could not have been constructed until after the middle of the first century A.D.

Consecutive types of masonry.

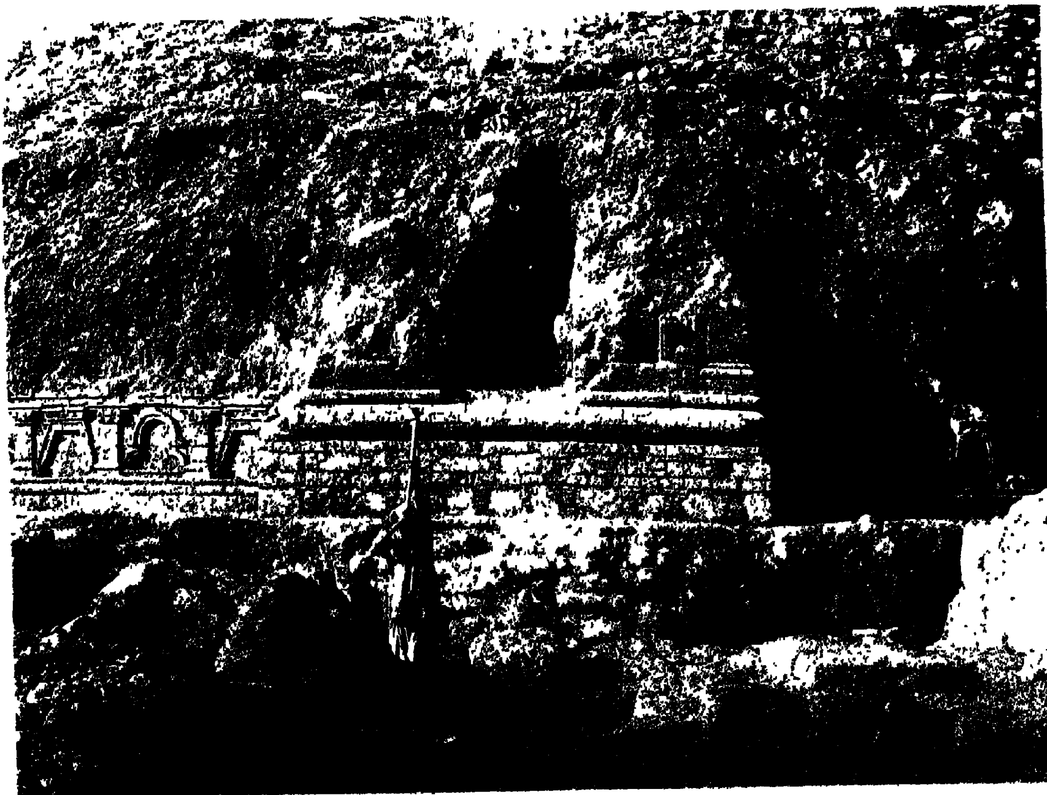
These chapels, as well as the walls flanking the gateways, are built in a very distinctive style of masonry known commonly as "diaper patterned." At the period of which I am speaking the diaper is characterised by the use of relatively small boulders and by the neatness of the piles of small stones in the interstices between them. This masonry is found in the chapels numbered B⁶, B¹², B¹⁶, D⁹, and D⁶, and will be seen illustrated in Pl. IV *b*.

The small diaper masonry in turn gave place to a new type in which larger boulders were employed. This is the third distinct style of masonry employed on this site. It is found in repairs subsequently executed to the chapel walls referred to above as well as in several later chapels, which were afterwards added, and is well exemplified in the chambers B⁵, B⁴, D⁵ and D⁸. This later and coarser diaper style seems to have come into fashion at Taxila during the second century A.D. With the lapse of time the buildings in which it was employed, in turn, fell to ruin; the spaces between them became filled with fallen débris and over this (at a height, that is to say, of 5 or 6 feet above the original floor) were constructed other chapels in still another type of masonry. This fourth type is characterised by the use of ashlar and diaper masonry combined, and appears to have come into vogue at the close of the 2nd century A.D. It is used for the repair of the upper parts of the earlier chapels as well as in the construction of new ones, *e.g.*, B¹, B⁷, B⁴, B¹³, D¹² and D⁶.

Thus we have four clear and distinct types of building immediately around the Main *stūpa*—first the rubble and *kañjūr* work of the Śaka-Pahlava period; secondly, the neat small diaper which came into fashion in the 1st century A.D.;

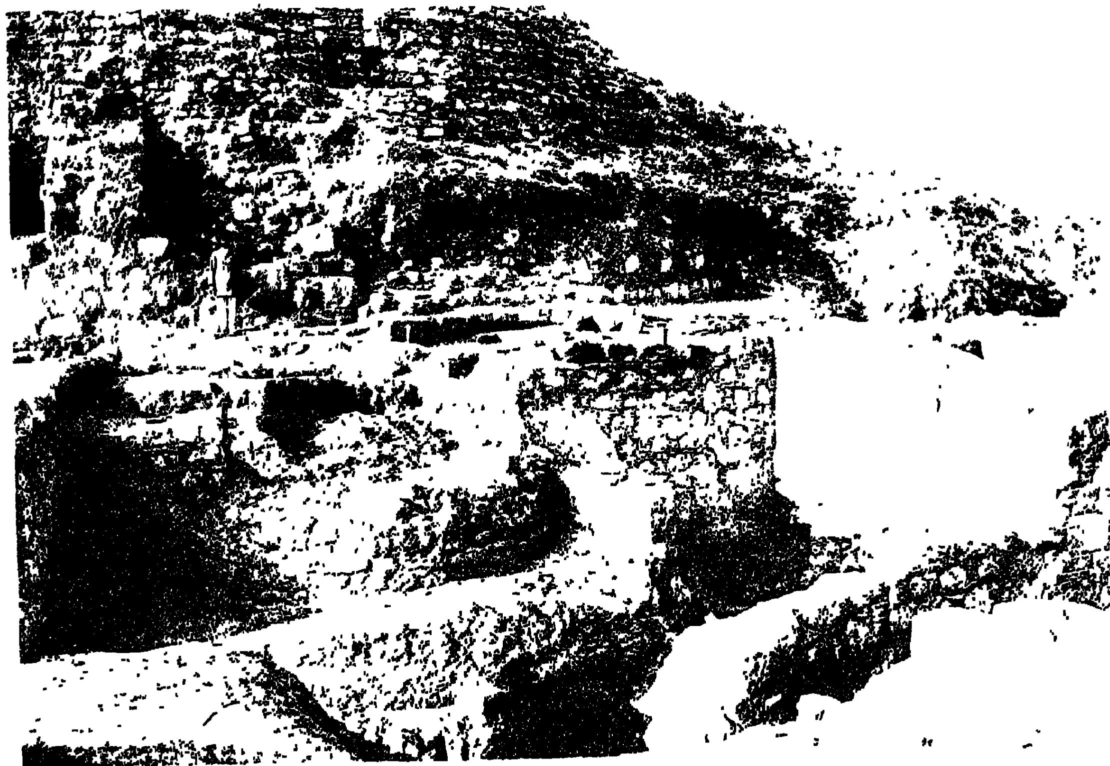


a. DHARMARAJIKA STUPA: BASE AND STEPS ON NORTH.



b. DHARMARAJIKA STUPA· DETAILS OF MOULDINGS AND NICHES ON EAST.

LITHOTYPE BY WALTER GRIGGS, LONDON W.C.



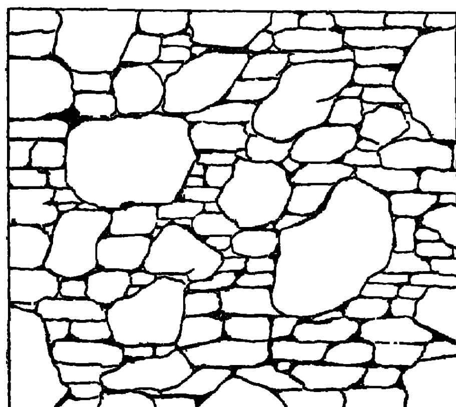
a. DHARMARAJIKA STUPA: B[9] AND ADJOINING CHAPELS FROM NORTH.



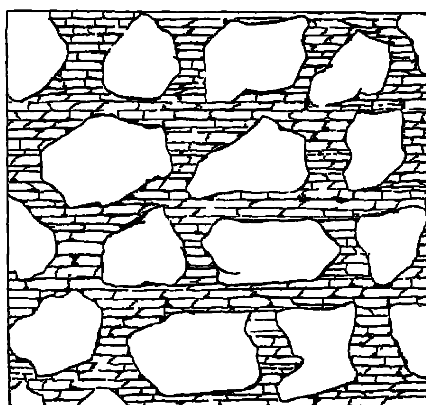
b. DHARMARAJIKA STUPA: D[1] AND ADJOINING CHAPELS FROM SOUTH.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

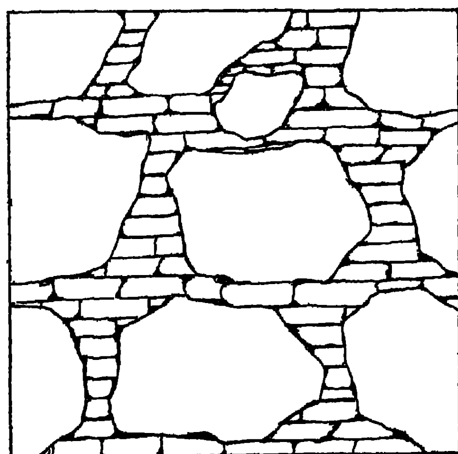
thirdly, the coarse and massive diaper of the 2nd century A.D.; and fourthly, the semi-ashlar, semi-diaper type of the 3rd and 4th centuries (Fig. 1). These four



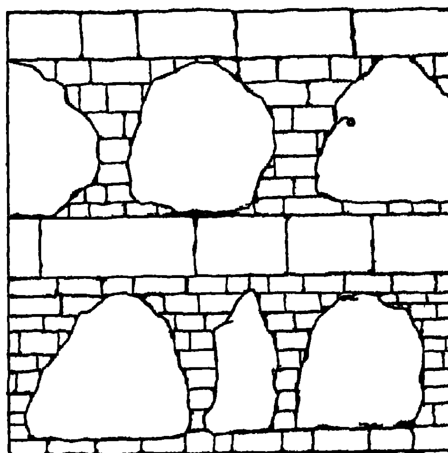
PARTHIAN



LATE 1ST CENTURY A.D.



2ND CENTURY A.D.



3RD CENTURY A.D.

Fig. 1.

consecutive types are equally well illustrated in other buildings which I have excavated on the top of the plateau and which I shall presently describe. They are also well represented, as we shall see, in the buildings at Sirkap and Jandiāl.

Minor antiquities from chapels round Main Stūpa.

As regards the antiquities found in these chapels around the main *stūpa*, they came mainly from the highest stratum and consist for the most part of stucco and terracotta figures, of which the following may be selected as typical examples:—

1. Stucco head of Buddha, 8¼″ high. Tip of nose, chin and ears damaged. Hair arranged over *ushṇīsha*. Conventionalised type of 3rd-4th century A.D. B[18]. (Plate V *b*.)

2. Similar, 5½″ high. Tip of nose damaged. B[18]. (Pl. VI *a*.)

3. Stucco head of Bodhisattva, 9″ high. The hair is disposed in strands falling from the *ushṇīsha* and ending in curls suggestive of bronze technique. Round the forehead it is confined by a circlet. B[12]. (Pl. V *c*.)

4. Terracotta head, 11½" high. Tip of nose and left eye damaged. The modelling of the features and treatment of the hair is singularly reminiscent of Hellenistic work. Like the head reproduced in Pl. V *d*, it probably dates as far back as the 1st century A.D., though found in a later stratum. B[12]. (Pl. V *a*.)

5. Terracotta head, 4½" high. Nose defaced. Wears moustache, elaborate turban and heavy ear ornaments. 3rd-4th century A.D. B[16]. (Pl. VI *a*.)

6. Stone lamp, 3" high, of rough workmanship with simple floral design on rim. Provided with ornamental projections on two sides and back. B[16]. (Pl. VII *f*.)

It is a strange thing that, notwithstanding the large number of heads that have been found, arms, torsos and legs are relatively rare. This phenomenon is not peculiar to Taxila. It has been observed on other sites also, and the explanation has been offered that these heads were affixed to the walls of the chapels, tier upon tier, without any bodies beneath them. I think this must have been the case sometimes; for I have found so many in a single chamber, for example in B[13], that there could not possibly have been room for the bodies of all of them. But in some cases, judging from the fact that hands and feet are also commoner than the torsos, arms and legs, I conclude that the latter must have been composed of mud or other perishable material, and that they fell to pieces as soon as rain water found its way into the buildings.

Stūpa J.

Besides the small chapels and *stūpas*, described above, which encircle the main structure, numerous other edifices have come to light on the plateau. One of the most interesting of these is the *stūpa* marked J in the plan, near the south entrance of the *Dharmarājikā stūpa*. It consists of a square base composed of three tiers which diminish in size as they rise. The dome above this base was probably round in plan, but has now entirely vanished. The lowest tier, which is set on a plinth of heavy limestone blocks, measures 32′ 4″ along each side and is 3′ 1½″ high. The core of this structure consists of heavy rubble blocks of limestone mixed with earth and smaller stones, the facing being of the semi-ashlar type of masonry, with *kañjūr* blocks let in between the limestone for the ornamental features (Pl. X *a*). In the lowest tier the decoration belongs to two periods, the *stūpa* having undergone extensive repairs. To the earlier period appears to belong most of the decoration on the north and west sides. This consists of a series of pilasters set on a continuous base moulding and surmounted by a narrow frieze and dentil cornice. The base moulding is not curvilinear in section but levelled in three faces as was customary in most of the later buildings at Taxila. The bases and capitals of the pilasters are but roughly carved, and the small brackets of the dentil cornice are quite plain. In the bays or interspaces between the pilasters on the north side are reliefs of seated Buddhas accompanied by a standing devotee on each side, whose attire is distinctively Indo-Scythic. These figures are executed entirely in stucco, and the face of the *stūpa* was also finished in the same material. On the west side of the building only one Buddha remains, set in a trefoil arch in the central bay. When the *stūpa* was repaired, these reliefs had already suffered damage, and the frieze above them was then lowered from its



a.



b





d.

a-d. TERRACOTTA AND STUCCO HEADS FROM DHARMARAJIKA STUPA.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

PLATE VI.



a-f. TERRACOTTA AND STUCCO HEADS FROM DHARMARAJIKA STUPA.

LITHOTYPE BY WALTER GRIGGS LONDON W.C.



a-f. MISCELLANEOUS OBJECTS FROM DHARMARAJIKA STUPA.

LITHOTYPE BY WALTER GRIGGS, LONDON W.C.

position over the capitals of the pilasters, and set in a line with them, thus resting on the shoulders of the Buddhas from which the heads had disappeared. At the same time a new series of pilasters was introduced on the eastern and southern façades of a more stunted form and surmounted with notched brackets let in between the capitals and the frieze. On these two sides there are no Buddhas.

The decoration on the second tier appears, as it stands, to belong mainly to the later repair. It consists of a row of elephants alternating with pairs of Atlantes—many of them in grotesque attitudes. (Pl. X *b*.) The decoration of the third tier has entirely vanished.

From the construction of this *stūpa*, as well as from the coarse style of its decoration and the plastic character of its sculptures, it is manifest that it belongs to the latest building epoch on this site, namely, to the close of the 3rd or beginning of the 4th century A.D. This date is borne out by the evidence yielded from a trench which I sank on the western side of the *stūpa*. I have mentioned above that the first floor which was laid around the *Dharmarājikā stūpa* consisted of a layer of grey river sand, which was mixed with a small percentage of lime and overlaid with grey plaster. This floor extended beneath the foundation of *stūpa* J. When the ground level had risen about 1′ 6″ above it, a second floor was laid composed of white *chunam*, 2″ to 3″ in thickness. This second floor appears to be contemporary with buildings of the earlier diaper type (latter half of 1st century A.D.); for close by *stūpa* J and running under the *stūpa* itself, are the remains of a structure of this class, the floor level of which corresponds with the later *chunam* floor. In the débris over this floor and below *stūpa* J were unearthed several old railing pillars of *kañjūr* stone, dating probably from the Pahlava period.

Stūpa D[4].

Immediately to the west of *stūpa* J is the plinth of a smaller *stūpa*, D[4]. The earliest *stūpa* on this spot was one of the circular variety, similar to those around the main structure and contemporary with them. Like them it was composed of a rubble core faced with square blocks of *kañjūr*. The size of this *stūpa* was afterwards increased by adding to it a square casing, also of *kañjūr*, which appears to be contemporary with the gateways of the *Dharmarājikā stūpa*. Of this second *stūpa*, which measures 22′ 3″ square, all that remains is a well-cut *torus* and *scotia* moulding of the plinthand, on the east side, the bases of two pilasters, one square and one round in plan, the two types having apparently alternated with each other around the plinth. At a still later date another and larger casing, also square in plan, was added, thus bringing its dimension up to 32′ 9″ square. The base of this latest addition is of small diaper masonry surmounted by solid blocks of *kañjūr*. It is a noteworthy feature of these remains that the earliest circular *stūpa* is not in the centre of the later additions, but this feature is not apparent in the plan, which had been drawn out before the existence of the earliest *stūpa* was discovered.

Building L.

The area to the west of these *stūpas* is devoid of buildings until we come to the structure L. This appears to have been a chapel raised on a high plinth and divided into two chambers which were approached by a flight of steps on the northern side. Only the plinth foundations now remain. They are constructed of large diaper masonry and stand to a height of 3′ 6″ above the ground level. All round the

building, however, were large numbers of Gandhāra sculptures, which had served to decorate the superstructure and which, there can be no doubt, were contemporary with it. This is an important point because the building furnishes us with another valuable index to the date of the sculptures, a problem on which there has been much discussion in the past. The whole collection of sculptures from this building is a very large one and must eventually form the subject of a special inquiry. In the meantime the following specimens may be taken as generally representative of the rest:—

1. Head of Buddha, 5″ high. Tip of nose damaged. Hair drawn back from forehead (Pl. IX *b*, 2.)

2. Similar, 3½″ high. Wears moustache. Left ear damaged. (Pl. IX *b*, 3.)

3. Damaged fragment of relief, 13½″ high, from scene depicting the Buddha's farewell to his sleeping women. The musician is naïvely shown with her head resting on her hands and fallen asleep over her drum, only the crown of her head and the garland which encircled it being visible. The right leg of another female is visible on the right of the relief. (Pl. VIII *b*.)

4. Relief, 19″ high, of which the top is broken, depicting, probably, the presentation of offerings to the Buddha, after his enlightenment. In centre, Buddha seated cross-legged on cushioned throne with his right hand raised in the *abhayamudrā*. Wears moustache. Hair dressed as usual. Before his throne is a low footstool. To proper right, the Vajra-bearer holding *vajra* in right hand. In front of him, three female worshippers, bearing offerings of flowers or uncertain objects in hands. To proper left of Buddha, four other female worshippers, three with offerings, the fourth in attitude of adoration. (Pl. VIII *d*.)

5. Damaged relief, 19″ high, depicting Buddha's first sermon in the Deer Park at Sārnāth. In centre, Buddha seated cross-legged on throne beneath a canopy of foliage. Left hand holding garment; right hand turning the wheel of the Law, which is supported by a *triratna* set on a low pedestal. On either side of pedestal, horned deer. On right and left of Buddha, a Bodhisattva. Behind, on right, the *Vajrapāṇi* holding *chaurī* in right hand and *vajra* in left. In front of him, two ascetics seated, and above, a flying *gandharva*. (Pl. VIII *e*.)

6. Damaged fragment of frieze, 14″ long, representing the archery contest. In centre, Siddhārtha with bended bow, wearing *dhoti*, scarf and turban, ear ornaments, necklace, armlets and bracelets. To left, hills and jangal conventionally indicated with lion in cave. Behind Siddhārtha, boy attendant holding quiver, and to proper left of latter, a figure apparently in state of terror. (Pl. IX *a*.)

7. Damaged relief, 8¾″ high, representing the exhortation of the gods to Buddha to declare his Law to the world. In centre, Buddha seated cross-legged in *abhayamudrā* on lion-throne under ornamental canopy. To either side of his head and holding on to the pillars of the canopy, a heavenly attendant bearing (?) *chaurī*. To right and left of canopy, six figures (Brahmā, Indra and four Lokapālas) in attitudes of entreaty. (Pl. IX *e*.)

8. Head in *alto-relievo*, 4½″ high. Chin and nose damaged. Elaborate head-dress arranged in coils, with band, consisting of 4 strands of beads centred with rosette in front and clasp at side. (Pl. VII *a*, 2.)



a.



b.



c.



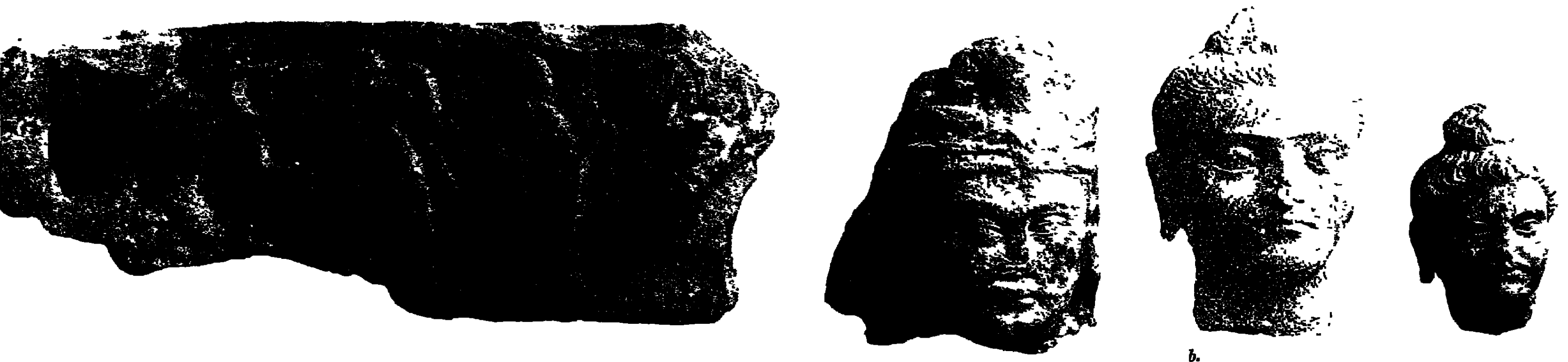
d.



e.

a-e. GANDHARA SCULPTURES FROM DHARMARAJIKA STUPA.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C





b. *d.* *e.*

a-e. GANDHARA SCULPTURES FROM DHARMARAJIKA STUPA.

LITHOTYPE BY WALTER GRIGGS LONDON W.C.

EXCAVATIONS AT TAXILA.



a. STUPA J: GENERAL VIEW FROM N.W.



b. STUPA J: DETAILS OF FRIEZES ON NORTH FACE, FROM N.W.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

9. Bust and head of (?) warrior, 5″ high, probably from scene depicting the attack of Māra. In centre of chest, circular plate secured by cross-straps. (Pl. VII *b*, 1.)

10. Head, 3⅜″ high. Tip of nose damaged. Wears moustache, ear ornaments and head-dress tied with clasp over forehead.

11. Head, 2″ high. Similar to No. 3, but no clasp on head-dress. (Pl. VII *b*, 3.)

12. Head, 3½″ high. Similar, with more elaborate head-dress. (Pl. VII *b*, 4.)

13. Head, 2″ high. Wears moustache and ear-rings, but no head-dress. Hair is drawn back from forehead and arranged in top knot. (Pl. VII *b*, 5.)

14. Corner pilaster or railing pillar, 9″ high; provided with tenon at top and bottom and oblong socket holes on two sides. On third side, female figure standing on vase pedestal beneath tree; wears *sāṛī*, short tunic, armlets and bracelets and holds uncertain object with both hands. (Pl. IX *c*.) On fourth side, similar figure, turned sideways.

15. Ditto, 9″ high. Nude male figure standing cross-legged on vase pedestal beneath tree. Wears two necklaces and armlets. (Pl. IX *d*.) On fourth side, similar figure, but clothed in tunic reaching to knees, and holding cymbals in hands.

In spite of the large number of Gandhāra sculptures recovered, the inscribed records on them are rare and fragmentary. They number only six.

1. Inscribed on side of lamp, 2½″ high (Pl. VII *e*), in two lines. The rim of the lamp is broken and the inscription partly defaced.

L. 1. *Tachhaile agadhamarai* [*e*]. *dhra* . . . . *sa* [*o*] *e* [*a*] *sa putrasa.*

L. 2. *danamukhe.*

"At Tachhaila (*Takshaśilā*) at the Agradharmarājikā (*stūpa*) . . . the gift of . . . . . son of . . . . . . " . . . (Pl. XIV *c*.)

2. On two fragments of a frieze. The beginning and the end are missing.

. . . . . *e puyae* [*a*] *tmanasa ñatimitra-salohidana arogadachhinae hoḍreana* . . .

" . . . . for the veneration of . . . . for the bestowal of perfect health upon himself and his kinsmen, friends and blood-relations . . . . " (Pl. XIV *f*.)

3. On a small fragmentary stone.

Mitrae Iṁ [*da*] *e* (?) *bharva* . . . . . (Pl. XIV *d*.)

4. On a fragmentary frieze. . . . *o* (?) *senasa ji ba* . . . (Pl. XIV *e*.)

5 and 6 are single letters only which seem to be masons' marks. (Pl. XIV *a* and *b*.)

The small memorials and chapels immediately to the west of the Dharmarājikā *stūpa* are still buried beneath a great heap of débris, much of which was thrown there when the great breach was made in the main building.

Apsidal Temple I[3].

Further out to the west, the most striking building is the apsidal temple I[3]. It measures 46′ 9″ long by 26′ 6″ wide, and stands to a height of about 5′ above the original ground level, which is some 2′ lower than the interior of the temple. It is built of large diaper masonry similar to that used in building L. Unlike other early apsidal temples the interior of the apse is polygonal, instead of round, each side of the polygon measuring about 8′. Inside this apse are the remains of an octagonal *stūpa* of *kañjūr* stone, 2′ 6″ below the base of which is a floor which must have been laid before the apsidal temple was built. The fore part of the temple appears to have consisted only of a passage corresponding in

width with one side of the polygonal apse and flanked by walls 9′ thick on each side This feature is not apparent in the plan, which was prepared before the excavation was complete.

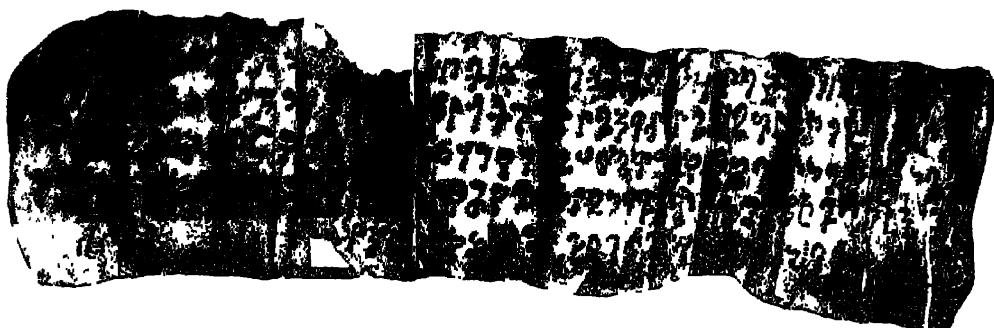
Buildings E and F.

Of the buildings E and F, situated on the western edge of the plateau, there is little to record. They are constructed of small diaper masonry subsequently repaired in places with later masonry. In the two chambers E[1] and E[2] are two solid circular *stūpas*, the foundations of which descend to a depth of some 10′. The walls around them are pierced by no openings, and it is difficult to understand the presence of the *stūpas* in these chambers. Two explanations seem admissible: (1) that what appear to be square chambers are in reality additions to the *stūpas* and that the space between the walls was filled in with débris; (2) that what now survives of both *stūpas* and walls is only foundation and that entrances through the walls existed at a higher level. Against both hypotheses is the fact that the interior of the walls, although relatively rough, is more carefully finished than is usually so in such cases. Possibly, further excavation on the site will help to throw light on this curious phenomenon. In favour of the second hypothesis it is to be observed that the other chambers near them to the north were raised on a high plinth standing about 4′ above the plateau and approached by flights of steps on the east. In one of these chambers, F[1], I found a floor of glass tiles of bright azure blue with a few other colours – black, white and yellow—mixed with them. These tiles average 10¼″ square by 1⅛″ thick and are of transparent glass, the first complete specimens of their kind which have yet been discovered in India. In connexion with these tiles it is interesting to recall the Chinese tradition that glass making was introduced into China from Northern India. The tiles are laid in a somewhat careless manner on a bed of earth, and it seems evident that they do not now occupy the position for which they were originally intended. The level, however, at which they are laid appears to have been approximately the level of the original floor.

Building G

Opposite the entrance to the apsidal temple is a complex of chambers, G[1] to G[7], the whole block measuring 111′ 4″ by 67′ 7″, the latest walls rising to a height of 5′ 10″ above the ground around. The earliest part of this group is the square *stūpa* of *kañjūr* faced with stucco in the chamber at the S. E. corner (G[3]). Round the base of this *stūpa* runs a well cut torus and scotia moulding, but the sides of the *stūpa* are plain. Next, in chronological order, come the three chambers at the N. E. corner, built of small diaper masonry. The other chambers facing towards the south exhibit three periods of construction, the earliest walls being in small diaper, the next in large diaper and the last, built on their ruins at a height of some 3′ above the old floor, in semi-ashlar masonry. All these chambers appear to have been chapels. In the room G[5], near the back wall opposite the entrance which faces the main *stūpa* and a foot below the floor, I found a deposit consisting of a steatite vessel with a silver vase inside, and in the vase an inscribed scroll and a small gold casket containing some minute bone relics. A heavy stone placed over the deposit had, unfortunately, been crushed down by the fall of the roof, and had broken both the steatite vessel and the silver vase, but had left the gold casket uninjured and chipped only a few fragments from the edge of the scroll, nearly all

EXCAVATIONS AT TAXILA



a. DHARMARAJIKA STUPA: SILVER SCROLL FROM G[5]



c.



d.



e.

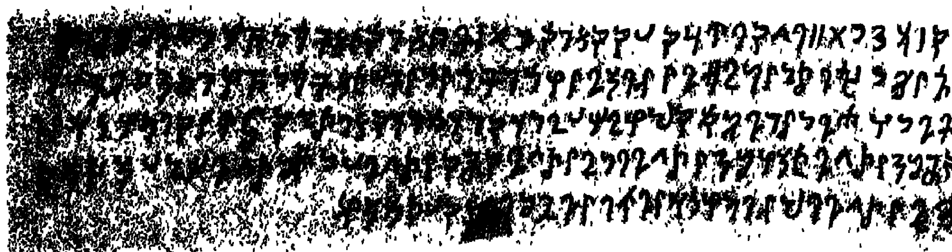


b.



f

b-f. DHARMARAJIKA STUPA: RELIC CASKETS FROM G[4]



g. DHARMARAJIKA STUPA: TRANSCRIPT OF SILVER SCROLL INSCRIPTION FROM G[5]

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

of which I was, fortunately, able to recover by carefully sifting and washing the earth in the vicinity. The cleaning and transcription of the record has been a matter of exceptional difficulty, as the scroll (Pl. XI *a*), which is only 6¼″ long by 1⅜″ wide and of very thin metal, had been rolled up tightly, face inwards, in order that it might be enclosed in the silver vase; moreover, the metal of which it is composed is silver alloyed with a small percentage of copper, which had formed an efflorescence on the surface of the extremely brittle band, with the result that I could neither unroll it without breaking it nor subject it to the usual chemical treatment. By the use of strong acid, however, applied with a zinc pencil, I was able to remove the copper efflorescence and expose, one by one, the punctured dots of the lettering on the back of the scroll, and then, having transcribed these with the aid of a mirror, to break off a section of the scroll and so continue the process of cleaning and transcription. In this way I succeeded in making a complete copy of the record from the back of the scroll, while the letters were yet intact. Afterwards, I cleaned in like manner and copied the face of each of the broken sections and was gratified to find that my second transcript was in accurate agreement with the first. My hand copy of the record appears in Pl. XI *g*. My reading of the inscription is as follows:—

L. 1. *Sa* 100. 20. 10. 4. 1. 1. *Ayasa Ashaḍasa masasa divase* 10. 4. 1. *iśa divase pradistavita Bhagavato dhatu* [*o*] *Ura* [*sa*]—

L. 2. *kena Lotaphria-putrana Bahaliena Noachae nagare vastavena tena ime pradistavita Bhagavato dhatuo Dhamara-*

L. 3. *ie Tachhaśie Tanuvae Bodhisatvagahami maharajasa rajatirajasa devaputrasa Khushanasa arogadachhinae*

L. 4. *sarva-budhana puyae prachaga-budhana puyae araha*[*ta**]*na puyae sarvasa* [*tva**] *na puyae mata-pitu puyae mitra-macha-ñati-sa-*

L. 5. *lohi* [*ta**] *na puyae atmano arogadachhinae nianae hotu* [*a*]. *de samaparichago.*

"In the year 136 of Azes, on the 15th day of the month of Āshāḍha, on this day relics of the Holy One (Buddha) were enshrined by Urasakes (?), son of Lotaphria, a man of Balkh, resident at the town of Noacha. By him these relics of the Holy One were enshrined in the Bodhisattva chapel at the *Dharmarājikā stūpa* in the district of Tanuva at Takshaśilā, for the bestowal of perfect health upon the great king, king of kings, the divine Kushana; for the veneration of all Buddhas; for the veneration of individual Buddhas; for the veneration of all sentient beings; for the veneration of (his) parents; for the veneration of (his) friends, advisers, kinsmen, and blood-relations; for the bestowal of perfect health upon himself. May this gift be........."[1]

In the chamber G^4 on the highest floor level, and appertaining to the same date as the semi-ashlar building, were numerous *kañjūr* blocks belonging to a small *stūpa*. These blocks were scattered in a heap on the floor, defying any attempt to reconstruct from them the design of the *stūpa* from which they had fallen. In one of the blocks I found two relic caskets of steatite which are illustrated in Pl. XI *b* and *f*. The former is 2⅝″ high, furnished with a small handle on the lid and

[1] This inscription has already been published by me in greater detail in the *J. R. A. S.*, October 1914, pp. 973-86.

adorned with concentric lines incised. Inside this casket was a smaller one of ivory and in the latter a still smaller one of gold (Pl. XI *d*) ⅝″ high, adorned with rough geometric and floral designs. Inside this gold casket were a piece of calcined bone, a small gold bead and a number of small pearls of various sizes and shapes. The other casket is 1¾″ high, and of the shape of a flat Greek pyxis, ornamented with incised swastika, lotus and cross-hatched designs. Inside this second casket was a small silver box (Pl. XI *c*), ⅝″ high, roughly ornamented and containing a smaller golden casket ½″ high (Pl. XI *e*). Within this were thin pieces of gold leaf and two pieces of calcined bone. In connexion with this block of chambers it remains to notice a few detached heads of sculptures found inside or near them.

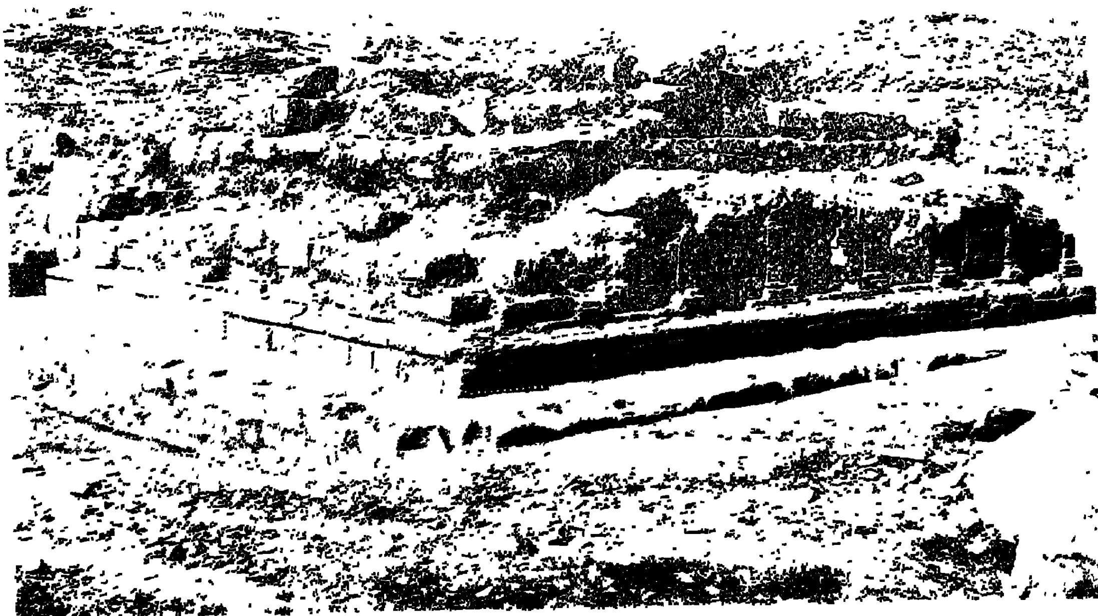
1. Stucco head of Buddha, 5″ high. Tip of nose and r. ear damaged. Conventional type of 3rd-4th century A.D. East of G[3]. (Pl. VI *b*.)

2. Head of Bodhisattva of Gandhāra stone, 4½″ high. Nose damaged. Wears moustache and elaborate turban. G[5]. (Pl. IX *b*, 1.)

3. Bearded male head, 9″ high, of terracotta. L. ear, l. eye and tip of nose damaged. Hair drawn back from forehead. Like the head figured in Pl. V *a*, this head is very different from the ordinary conventional types of the 3rd and 4th centuries A.D. and is probably to be ascribed to the 1st century A.D. G[6]. (Pl. V *d*.)

Two pits M[4]. Going north from this building and past the foundations of another chapel, M[2], the excavation of which has yet to be completed, we come to two small pits M[4] and one contiguous to it, sunk below the old level of the ground. The walls of these pits are constructed of semi-ashlar masonry and the floor of one of them, M[4], is composed of Gandhāra sculptures laid face downwards. The structure, therefore, affords another useful aid to determining the date of this school of art; for the sculptures were already in a sadly defaced condition when they were let into the floor, and it may safely be concluded that at least a century must have elapsed from the time that they were carved up to the time of the construction of the pit, which cannot be assigned to a much later date than about 300 A.D. The pit, of which the interior is lined with rough plaster, appears to have been used for the storage of water or, possibly, for the mixing of mortar.

Building H. Still further north of these pits and at the northern edge of the plateau is the building H (Pl. XIII *b*) measuring 71′ × 51′, the latest walls of which rise to a height of 7′ 10″ above the surrounding level. Like the structure G, this one also exhibits three types of masonry, representing three different periods of construction, and it shows also the same rise in the levels prior to the addition of the latest walls. The building appears to have been an oblong shrine probably intended for a figure of the dying Buddha. The original chapel of small diaper masonry measured 35′ 11″ long by 12′ 10″ deep, and was probably provided with an open porch in front. Subsequently it was strengthened and enlarged by the addition of a contiguous wall all round it (not apparent in the plan) in the larger diaper style, as well as by a second wall enclosing a procession passage and portico in front. Later on, when the level had risen several feet, additions in semi-ashlar masonry were made, and other repairs were carried out at a still later date. These last repairs are also in the semi-ashlar style, but they differ from the earlier type in having two ashlar courses



a. STUPA K: GENERAL VIEW FROM S.W.



b. STUPA K: BUDDHA IN NICHE ON NORTHERN FACE.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

instead of one interposed between the alternate courses of diaper. The only minor antiquities of interest in this building were 28 debased silver coins of the Greek king Zoilus. They were brought to light beneath the foundation of the earliest chapel, where they appear to have been deposited before the site was occupied by the Buddhists.

Stūpa K.

Between the building H and the main *stūpa* is a group of several especially interesting monuments. The *stūpa* K, which is nearest to the chapel, belongs to the later series of buildings, being composed of a core of rough rubble faced with semi-ashlar masonry and *kañjūr*, the latter being used for mouldings, pilasters and niches (Pl. XII *a*). The plinth of the *stūpa*, which has a height of 9½" and is constructed of limestone blocks, measures 30′ 1″ and projects 2′ 5″ from the face of the *stūpa*. The lowest terrace of the latter rises to a height of 5′ 3″ above the plinth; the second recedes back from it 3′ 11″, and has an elevation of 2′ 2″. The lowest terrace is adorned with eight Corinthian pilasters along each side set on a torus and scotia moulding and surmounted by notched brackets, frieze and dentil cornice. As in other late buildings, the torus moulding is not finished off round but is bevelled in three faces. The dentils are more decorative than those in *stūpa* J, and the other details also are better proportioned and more finely executed than in that *stūpa*. Between the central pair of pilasters on each side is a deep niche faced by a trefoil arch, in which was a seated figure of the Buddha. On the north, thanks to this side of the *stūpa* having been walled up, both the niche and the Buddha are comparatively well preserved (Pl. XII *b*), and it is interesting to observe that the latter betrays the same relative superiority in its style as do the architectural features. From the care with which the *kañjūr* decoration was originally cut, it seems probable that this *stūpa* was not at first coated with stucco, though it may have been whitewashed. At a latter date, however, a thick coat of stucco was added with new and coarser details worked on it, *e.g.*, a bead and reel moulding under the dentil cornice, and sunk panels in the face of the pilasters. These details bear no relation to the carvings on the *kañjūr* stone beneath.

Of the second tier no ornamental features are preserved and the dome above has entirely vanished.

On to the north side of this *stūpa* were subsequently built several small chambers, probably chapels, facing the north. They are constructed of the same semi-ashlar masonry, but of a somewhat later type, and stand on a common base adorned with a row of stunted pilasters alternating with niches of the same design as those on the upper *pradakshiṇa* path of the main *stūpa*, namely, trefoil arches and doorways with sloping jambs in which figures of the Buddha were placed.

Stūpa N⁴

Another structure almost identical in style and size with the one just described is the *stūpa* N⁴, to the N.-N.-E. of the main *stūpa*, the only difference discernible being that the pilasters in the latter are more slender than in *stūpa* K. It is built in receding tiers on a plinth measuring 28′ 10″ square by 6″ in height, the lowest tier having an elevation of 5′ 5″, and the second an elevation of 2′ 1″. On the north and west sides of this *stūpa* some chapels are making their appearance which were subsequently built on to it, but the excavation of these has yet to be effected.

Stūpa P^1.

To the east of the *stūpa* K are two buildings, P^1 and P^2, and in the space between, four small *stupas* K^2 K^3 P^3 and P^6 (Pl. XIII *a*). P^1 is a solid structure of large diaper masonry standing to a height of about 7′ 6″ and measuring 25′ 4″ by 24′ 10″, with a projection on the south side facing the main *stūpa*, by which access was gained to the top of the plinth. There is a base moulding of *kañjūr* running around the *stūpa*, but otherwise the walls are of limestone and plain. Against the back wall, *i.e.*, the north wall of the *stūpa*, are set two colossal Buddhas side by side seated on a plinth of *kañjūr* stone, 13′ 1½″ long by 2′ 4″ wide, with an elevation of 2′ 10″; the Buddha figures attain a further height of 4′ 3½″ above the plinth. The bodies of these figures are built up of small blocks of *kañjūr* stone faced with a thick double coating of stucco in which the details are worked. They are seated with their hands resting in the lap in the *dhyāna-mudrā*, but their heads are unfortunately missing.

Chapel P^2.

The building P^2 is a chapel which was subsequently constructed close against the face of the Buddha statues above described. It is built of semi-ashlar masonry throughout, but there are no ornamental or other features worthy of notice.

Stūpas K^2, K^3, P^3, P^6.

The four small *stūpas*, K^2 K^3 P^3 and P^6 all belong to a relatively late period, their date seemingly lying between those of the two structures P^1 and K. In each case they are set on a plinth of limestone and faced with *kañjūr*. The mouldings and other features which survive indicate a date not far removed from that of the building K. In one of these, P^6, was found an earthen relic vase along with ten coins of Huvishka and Vāsudeva. Five of these coins were found inside the vase along with some ashes and five outside. The *stūpa* K^3 yielded another earthen relic vase which contained some ashes and three coins of Kanishka. A small earthen vase which was found in the *stūpa* P^3 yielded no coins.

It is gratifying to note that the date of these *stūpas*, as established by the coin finds, agrees with the date I had assigned to them on other grounds before the *stūpas* themselves were opened.

Buildings P^4 and P^5.

The two structures P^4 and P^5, which flank the projection on the south side of the *stūpa* P^1, are similar in style to the chapel P^2 and are no doubt contemporary with it. Of these, P^5 is a small chapel and P^4 a solid rectangular structure measuring 28′ 1″ by 19′ 10″.

Minor Antiquities.

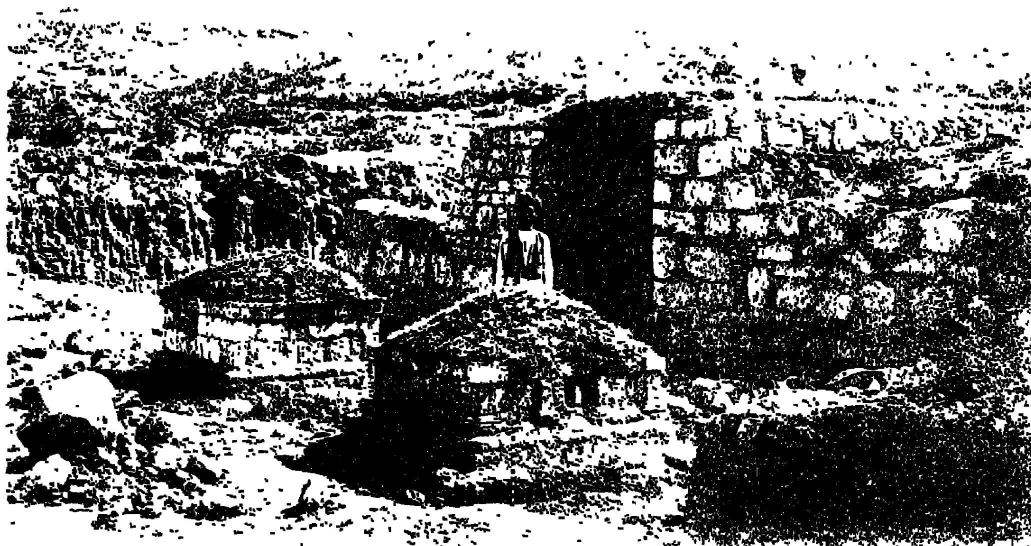
It remains to notice a few minor antiquities from this site other than those described above.

(1) Stucco head of Buddha, 7½″ high. Conventionalised type of 3rd-4th century A.D. P^4. (Pl. VI *f*.)

(2) Stucco head, 5″ high, of a monk (?) with bald head, shaggy eye-brows and wrinkles on cheeks and forehead. Tip of nose and ears damaged. N.-E. of main *stūpa*. (Pl. VI *d*.)

(3) Stucco head, 6½″ high. Tip of nose, lips and ears damaged. Wears elaborate turban. P^4. (Pl. VI *e*.)

(4) Grey sandstone torso of a male figure, 16″ high. Wears *dhoti*, scarf and bracelets. Late style. N.-E. of main *stūpa*. (Pl. VII *d*.)



a. STUPAS P^1, P^3 AND P^6: GENERAL VIEW FROM S.W.



b. BUILDING H: GENERAL VIEW FROM S.E.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.





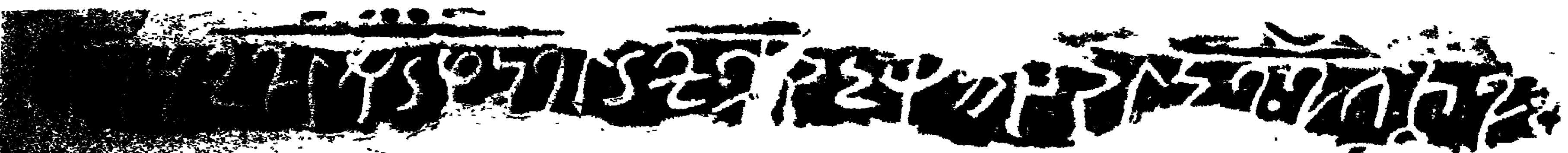




d.



e.



f.

LITHOTYPE BY WALTER GRIGGS, LONDON W.C.

a-f. INSCRIPTIONS FROM DHARMARAJIKA STUPA.

Sirkap.

From the Dharmarājikā *stūpa* I shall now ask the reader to accompany me over the precipitous spur of Hathiāl and down into the city of Sirkap—the second of the three cities of Taxila, which appears to have been founded by the Indo-Greek kings and to have remained in occupation during the Śaka, Pahlava and Kushān epochs, until the reign of Wima Kadphises. Here, on the east side of the main street which runs north and south through the heart of the city, I have brought to light several extensive buildings. Of these the most northerly is the apsidal Temple D. This temple, the plan of which will be apparent from Plate XV, faces to the west, with a rounded apse at the east end. It is placed in a spacious rectangular courtyard with two raised platforms to right and left of the entrance of the temple and rows of chambers for the monks against the west compound wall. The temple has been built on the ruins of earlier buildings of the Pahlava epoch (Pl. XVI); and with a view to providing a level court and at the same time adding to the impressiveness of the building, these earlier structures were filled in with débris and a platform thus provided, the floor level of which is some 4′ 6″ above the level of the street. Access to this platform from the street was furnished by two flights of steps laid parallel with the west compound wall on its outer side. In each flight are five steps composed of large limestone blocks, which measure 5′ 6″ in width with risers of 8″.

Apsidal Temple D.

The outer compound wall of the temple is built of diaper masonry of somewhat irregular construction, which appears to be transitional between the smaller and larger diaper styles. Its average thickness is about 5′ 9″. Above the level of the courtyard it is now standing in some places to a height of 2 or 3 feet, but its foundations go down to a depth of some 8 feet, with three footings on the inner and outer sides, in order the better to distribute the weight. As the monks' chambers abutting on to the west wall were of no great size and as their walls had no great weight to carry, their foundations were taken down only 1′ 6″ below the level of the court.

In the plan a second row of chambers is shown immediately to the east of the monks' cells. These, however, have nothing to do with the apsidal temple. They were exposed at a lower depth and belong to the structures of the Pahlava epoch, which were filled in when the temple was erected. Below these, again, some other walls of the Greek period were brought to light. The digging here was carried down in places to a depth of about 18′, and yielded among other things an ivory pendant adorned on either side with a head of the Greek philosopher type. The pendant measures $2\frac{1}{8}$″ in width. (Pl. XX *d.*)

Immediately in front of the monks' cells and to the right and left of the entrance of the temple are the foundations of two small *stūpas* consisting of heavy limestone blocks with their interstices filled, after the usual manner, with smaller stones. The superstructures of these two *stūpas* had been demolished, probably by treasure-seekers in recent times, and only one course of the foundations is now entire. On and around the foundation bases, however, were found numerous blocks of *kañjūr* stone together with stucco heads and decorative objects which had once served to adorn the edifice. Appended below is a list of the more important ones.

1. Stucco head, 13½″ high. Ornamental turban in three rolls crossing in the centre of the forehead and finished with a fan-tail ornament above. Nose, ears and chin slightly defaced. (Pl. XVII *a*.)

2. Stucco head, 6¼″ high. Hair cut across above the forehead. Lips smiling, with teeth visible. Left ear missing. (Pl. XVII *b*.)

3. Stucco head, 8¼″ high, apparently of a Satyr. Curly hair, beard and moustache; pointed ears. (Pl. XVII *c*.)

4. Stucco head, 5″ high. Wears moustache and turban like No. 1. Right ear missing. (Pl XVII *d*.)

5. Stucco head, 5¼″ high Hair arranged in strands ending in curls and encircled by a floral wreath. Ears missing. (Pl. XVIII *a*.)

6. Stucco head, 4¾″ high. Similar. (Pl. XVIII *b*.)

7. Stucco head. 5″ high. Wears beard and moustache. Forehead broken away. (Pl. XVIII *c*.)

8. Stucco head, 6½″ high. The head is shaved except for a single plait of hair, which falls from the crown over the forehead. Nose and right ear damaged. (Pl. XVIII *d*.)

9. Stucco head, 4¾″ high. Hair arranged in the fashion of a wig, with high top knot. (Pl. XVIII *e*.)

10. Stucco head, 7½″ high. Similar to No. 1; wears ear-pendants. Nose defaced. (Pl. XVIII *f*.)

11. Head of female, 4″ high. Hair parted in the centre of the forehead and plaited at the sides. *Tilaka* on the forehead.

12. Stucco fragment, 7″ long, representing a cluster of grapes.

The value of these terracottas and stuccos is all the greater because their date can be fixed with approximate certainty. In the débris of the courtyard both here and at other spots numerous coins were unearthed belonging mainly to Kujūla-Kadphises and Hermæus with a few of earlier date mingled with them, and it appears practically certain that the building was already falling to decay in the latter part of the 1st century A.D. No coin later than Kujūla-Kadphises has been found in the débris of this building, and none later than Wima-Kadphises in the buildings round about.

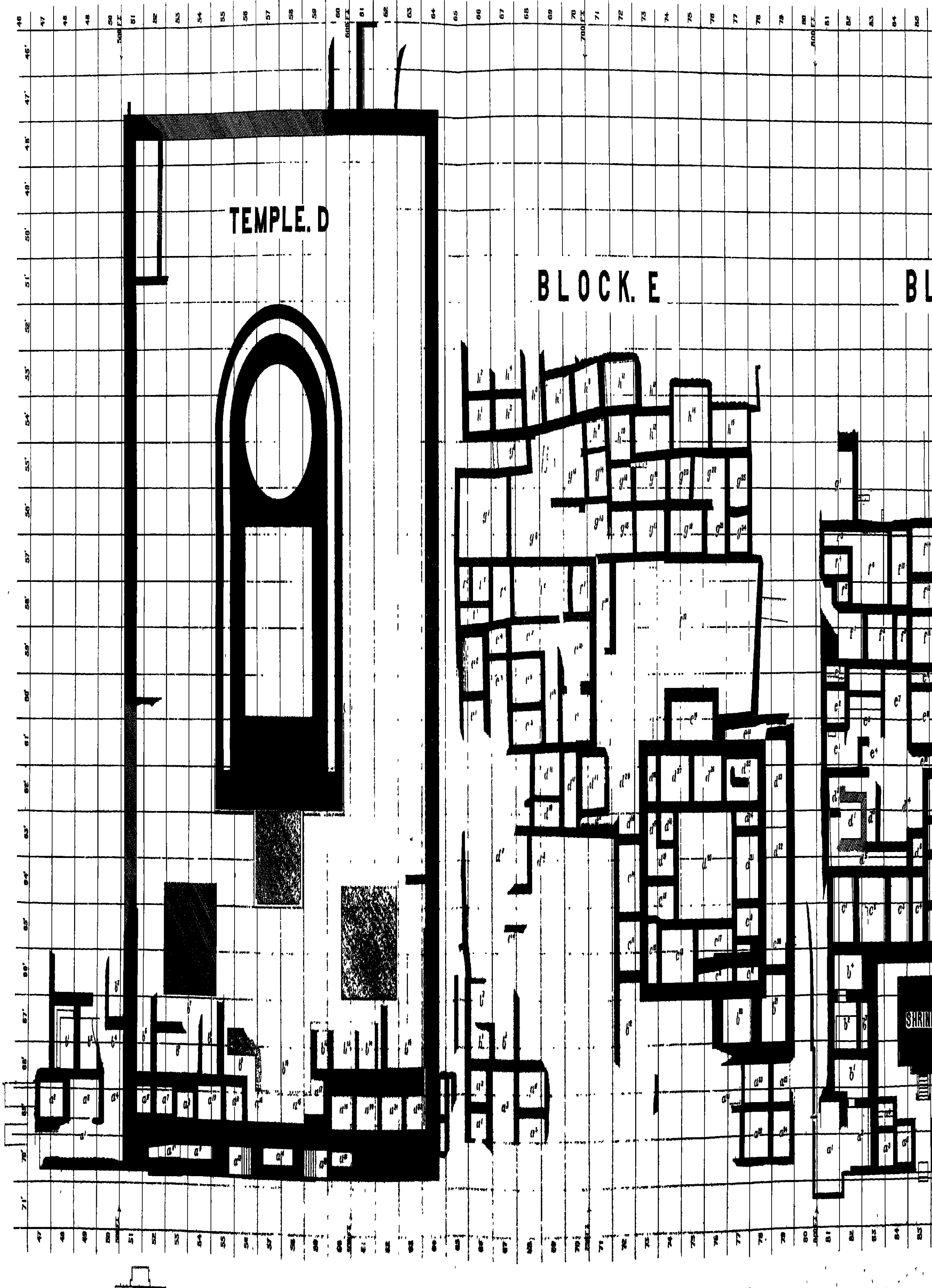
The apsidal temple, which stands in the middle of the court, measures 129′ east and west, including the entrance, and 51′ north and south. At its highest point it is standing to a height of 6′ 6″ above the level of the courtyard.

Just as the court in which the temple stands was raised above the level of the street, so the temple itself stood on a plinth 5′ 6″ high above the level of the court.

The temple, as will be seen from the plan, consisted of a large central chamber which measures 41′ east and west and 28′ 9″ north and south, with a circular apse behind, the whole surrounded by a procession passage to which access was gained from the front porch. Thus the plan is very similar to that of the Sudāma cave in the Barābar hills, but with this difference, that in the latter case there was no passage around the outside of the chambers. In the middle of the apse, which measures 29′ in diameter, originally, no doubt, there was a *stūpa*, as was always

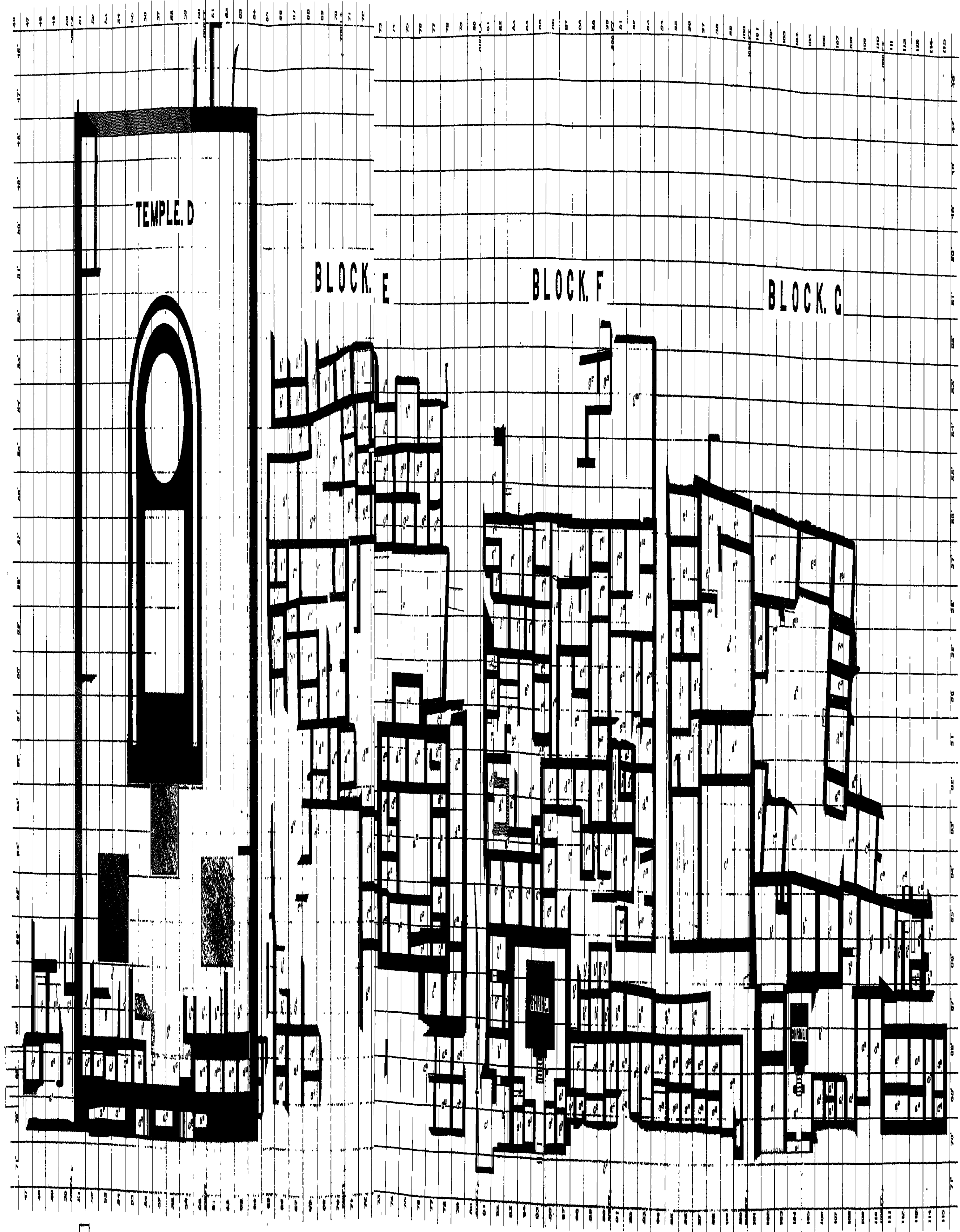
EXCAVATIONS AT TAXILA.

SIRKAP



EXCAVATIONS AT TAXILA.

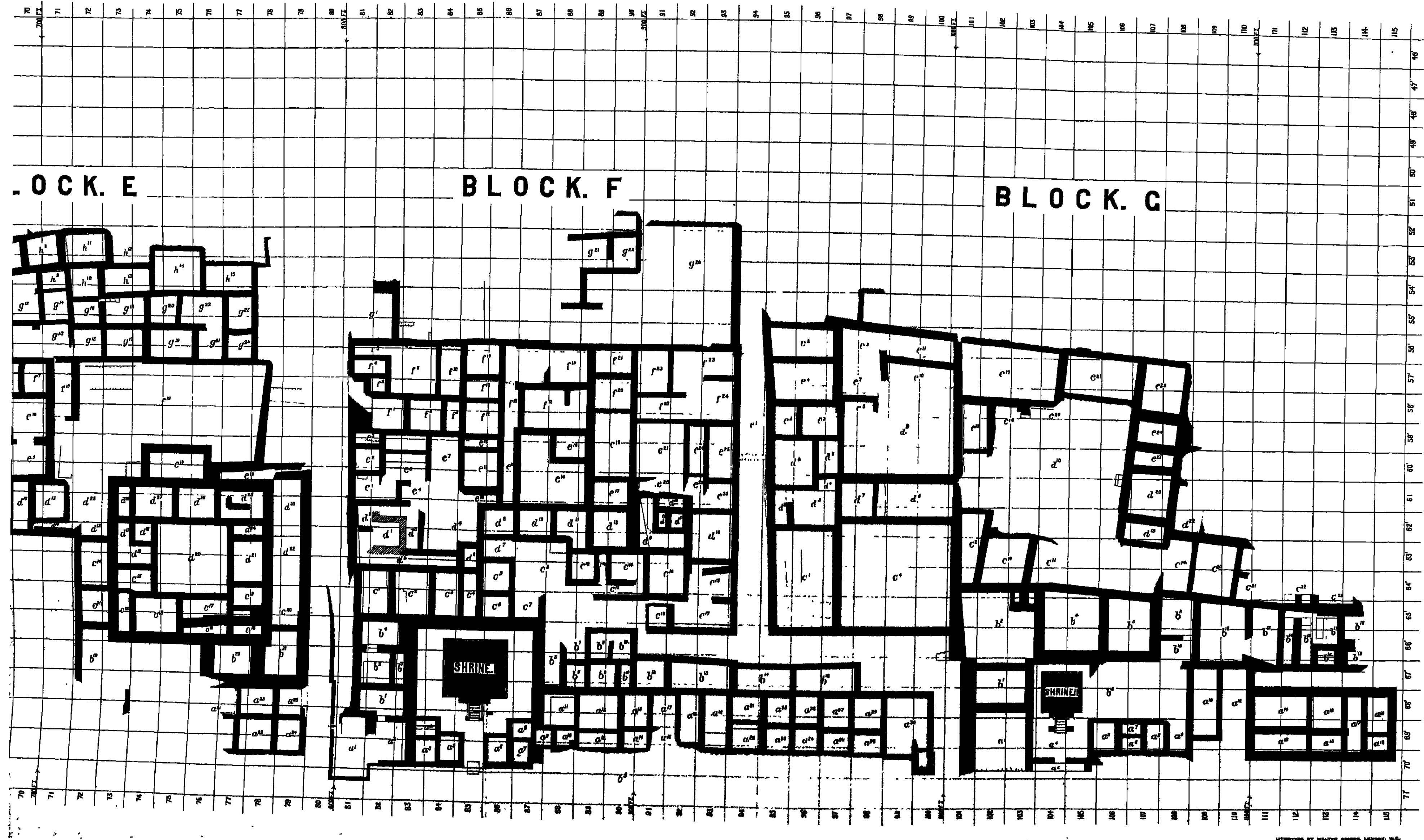
SIRKAP



EXCAVATIONS AT TAXILA.

SIRKAP

PL. A





a. SIRKAP, TEMPLE D: GENERAL VIEW FROM S.W.



b. SIRKAP: GENERAL VIEW OF EXCAVATIONS FROM N

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a-d. SIRKAP: STUCCO HEADS FROM TEMPLE D.

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PLATE XVIII.



a.



b



c.





e.



f.

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a-f. SIRKAP: STUCCO HEADS FROM TEMPLE D.

the case in such chapels; but treasure-seekers of some bygone age had forestalled me in its excavation and I found not a single stone of it *in situ*.

All the interior foundation walls of this building are, like the outer compound walls, constructed of rough irregular diaper masonry. But on the outer face, the base mouldings, of the ordinary torus and scotia form, are composed of *kañjūr* blocks, the wall above them being of somewhat neater diaper than the interior foundations. No doubt, both the *kañjūr* blocks and the limestone diaper masonry were once covered with stucco. The mouldings of *kañjūr* stone referred to above were originally returned along both sides of the entrance steps, but there are only two blocks on the northern side now in position.

A curious feature of the walls of this temple is that at a height of about 1′ 6″ above the floor level there is a break in the masonry occasioned by a deposit of 6″ of earth. The only explanation I can offer of this phenomenon is that the construction of the temple was, for some reason or other, stopped at that point, and when, after a lapse of time, the work was resumed, the builders continued the construction without taking the trouble to clear away the deposit.

As to the elevation of this temple it is impossible to speak with certainty, but it may plausibly be surmised that the *pradakshiṇa* passage was lit by windows pierced in its outer walls, as was the case with the temple at Jandiāl, which will be described below, and that light into the interior was admitted only through the doorway. The roof was of wood covered with earth, as is proved by the remains of timber and a large number of iron nails, bolts, clamps, etc., found in the débris to the north of the temple.

Block E.

Immediately to the south of the Apsidal Temple and on the east side of the Main Street I have excavated several large blocks of buildings divided one from the other by narrow side streets. The block E, which is the one nearest to the temple, appears particularly irregular in the plans on Pl. XV and XIX, for the reason that three separate strata of walls are represented, the uppermost belonging to the early Kushān or late Pahlava times, the second to the Śaka-Pahlava period, and the lowest to the Greek. Below these is still a fourth stratum, which has yet to be examined. It probably belongs to the early Greek period. To the latest period belongs the well-defined square house comprising the rooms Nos. C^{12}, C^{13}, C^{15-19}, D^{17-21} and D^{24-28}. It is built of rubble masonry approximately of the small diaper type but rougher, and is constructed on the usual plan with a square courtyard in the centre surrounded by chambers on the four sides. This is the ordinary plan of the ancient Buddhist monasteries of India, which were copies on a larger scale of the private houses of the time. In two of the rooms of this house I found a large number of coins of Kujūla-Kadphises along with a few of Gondopharnes and Azes II, which were still in circulation in the time of Kujūla-Kadphises. Coins of Gondopharnes and Azes II were also found in considerable numbers in the débris of the buildings belonging to the second stratum.

Of the plans of the other buildings comprised in this block I shall not attempt to say anything, until they can be further disentangled by excavation and explained with the help of coloured plans differentiating the several strata. In the meantime, however, there are a number of minor antiquities of considerable value from some of these chambers, which must not be passed over in silence. One of these is a

charming bronze statuette of a child of late Hellenistic workmanship (Pl. XX *f*). This I unearthed in the small chamber C^{18}, near the south-west corner of the square house and in the second, or Śaka-Pahlava, stratum. The statuette is 5″ high. The child, perhaps Harpocrates, wears a long tunic so disposed as to leave the left shoulder bare. Its hair is arranged in curls, with one long curl falling over the right ear and a plait at the back of the head (Pl. XX *h*). The head-dress consists of a miniature vase, which is obviously ornamental or symbolic, and not meant to represent an actual vase carried on the head of the child. In the left hand was carried some object, possibly a flower, which has disappeared. Pl. XX *g* shows the statuette in the corroded state in which it was taken out of the ground, and Pl. XX *f* and *h* show it after cleaning. About 2′ lower down in the same chamber I brought to light an earthen jar closed at the top with a disc and containing a head of the Greek God Dionysus, a large quantity of gold jewellery, a silver spoon and the several other articles enumerated below. The disc measures $4\frac{11}{16}$″ in diam., and is composed of two thin plates, iron on the inside, silver on the outside, rivetted at the edge with silver nails. Originally, perhaps, it did duty as the boss of a shield.

1. Head of Dionysus in silver repoussé, $3\frac{3}{4}$″ high, with stand beneath, $1\frac{1}{2}$″ high. The relief of the head is $1\frac{1}{4}$″ deep (Pl. XX *e*). The metal is extremely thin and brittle, and there is a break near the right ear and at the base of the rim. The head of the god is bald on top and wreathed with a grape-vine. His ears are pointed. In his right hand he holds a two-handled wine-cup (*cantharus*). Behind the head passes the curved staff (*thyrsus*) with a bell suspended at its end. The front of the stand is adorned with a conventional palmette and rosette beneath; behind it, is a curved projection which enabled the head to be set in a slanting position on the table. The relief is Hellenistic in style and of very high class workmanship (Pl. XX *a-c* and *e*).

2. Silver spoon, $6\frac{3}{8}$″ long. The handle terminates in a cloven hoof and is attached to the back of the spoon by a 'rat-tail' ridge. (Pl. XX *i*.)

3. Pair of bangles of thin gold on core of *lac* (?). Diam. $3\frac{1}{8}$″. The ends were closed with separate discs of beaten gold. (Pl. XXI *a*, 1 and 2.)

4. Ditto. Diam. $3\frac{1}{8}$″. (Pl. XXI *a*, 3 and 4.)

5. Pair of ear-rings, $2\frac{1}{16}$″ diam., of thin gold on core of *lac* (?), provided with clasp attached by ring hinge. The clasp is of double horse-shoe design, ornamented with cinquefoil rosette, two hearts and strap. The hearts and rosettes were formerly inlaid with paste, which has now perished. (Pl. XXI *b*, 1 and 2.)

6. Two ear-pendants of gold, 2″ high. They are composed of rings decorated on the outside with double rows of beads and granules, with granulated bud-like drops depending from them. The latter end in five terminals consisting of bunches of berries and granules. (Pl. XXI *b*, 3 and 5.)

7. Flower-shaped pendant of gold, $2\frac{5}{8}$″ high. It is composed of six petals, backed by granulated ribbings and six smaller heart-shaped petals at their base, once inlaid with paste or jewels. Attached to the lips of the larger leaves is a ring with granulated edge, from which six chains were suspended with bells at their ends. Three of these are now missing. The chains are quadruple plats. (Pl. XXI *b*, 4.)

EXCAVATIONS AT TAXILA.



a. SIRKAP, BLOCK E: GENERAL VIEW FROM N.W.



b. SIRKAP: GENERAL VIEW OF EXCAVATIONS FROM N.W.

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PLATE XX.



a–i. SIRKAP: MINOR ANTIQUITIES.

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8. Plain gold finger ring, $6\frac{3}{4}''$ diam., with flattened bezel engraved with Kharoshthi legend, '*Sadralasa*' (?) and Nandipada symbol. (Pl. XXI *b*, 6.)

9. Gold hoop finger ring, $\frac{7}{8}''$ diam., of thin metal, on core of lac (?). The bezel is oval, enclosing cornelian stone engraved with cornucopia, fluted vase, and spear in the Hellenistic style. (Pl. XXI *b*, 7.)

10. Gold hoop finger ring, $\frac{7}{8}''$ diam., with oval bezel enclosing silver inlay. The device on the silver is too corroded to be distinguished. (Pl. XXI *b*, 8.)

11. Gold hoop finger ring, 1″ diam., with flat rectangular bezel and clusters of four drops on either side. The inlaid stone is lapiz lazuli, engraved with the figure of a warrior armed with spear and shield and an early Brāhmī inscription to his proper left. The style of the engraving is Hellenistic. The inscription reads:— . . . . . *samanavasa*. (Pl. XXI *b*, 9.)

12. Gold chain, $19\frac{5}{8}''$ long, composed of four double plaits fitted with ring at one end and hook at the other. (Pl. XXII *a*.)

13. Six cylindrical pendants belonging to necklace, each $\frac{5}{8}''$ long. The casing is gold open work of various reticulated designs, enclosing core of turquoise paste, green jasper, and other stones. Attached to each are two small rings for suspension. (Pl. XXII *a*.)

14. Seven open-work gold beads, probably inlaid with paste, $\frac{3}{10}''$ diam. (Pl. XXII *a*.)

15. Pair of gold ear-rings, bound with wire at ends, $\frac{7}{12}''$ across. (Pl. XXII *a*.)

16. One gold ear-ring of coarse workmanship, $\frac{5}{8}''$ across. (Pl. XXII *a*.)

17. Oval locket of gold, 1″ long. The jewel is missing from the centre.

18. Pair of diamond-shaped attachments, probably for ear-rings, $\frac{1}{2}''$ long, of gold inlaid with garnets *en cabuchon.* Provided with two hinge rings at back. The gem is missing from one specimen. (Pl. XXII *a*.)

19. Pair of hollow, club-shaped gold pendants, $1\frac{1}{16}''$ long. (Pl. XXII *a*.)

20. 60 hollow gold beads, round, and of varying sizes. (Pl. XXII *b*.)

The articles contained in the above deposit appear to have been buried beneath the floor of the chamber about the middle of the 1st century B.C. But a number of these articles had then been in use for a considerable time, as is proved by the extent to which they were worn. I assign the bronze statuette to the 1st century B.C. and the lapiz lazuli ring and the head of Dionysus, which is certainly the finest example of Greek work yet discovered in India, to the previous century.

A little later on I exhumed another earthenware jar on the north side of the central courtyard (F [12]) of the same block, which proved to contain a small figure of winged Aphrodite executed in gold repoussé, a gold medallion bearing the figure of a Cupid and the other articles and coins enumerated in the following list.

1. Gold repoussé figure of winged Aphrodite or Psyche, $2\frac{1}{2}''$ high. Made in two pieces joined at the back edge. The elbow of the goddess rests on a small pillar. The details of hair, wings, necklace, etc., are indicated by punched dots. At the back are three small rings for attachment, two behind the wings and one behind the foot. (Pl. XXII *b*.)

2. Round gold repoussé medallion made of two pieces, beaten and joined together at edges. Diam. $1\frac{1}{8}''$. In centre, winged Cupid dancing, encircled by flowing lines. This and the previous figure are of coarse workmanship, made apparently by beating a thin gold plate into a mould. (Pl. XXII *b.*)

3. Nine oval-shaped jacinths cut *en cabuchon* and hollowed behind. They are engraved with various intaglio figures of victory, Eros, busts, etc.

4. One flat cornelian ditto, with bust intaglio. Broken.

5. Three garnets *en cabuchon*, dot and comma shape, used for inlay.

6. Two oval glass gems. (*a*) with flat face banded in green, white and blue; engraving indistinct; (*b*) *en cabuchon*, of dull brown glass; engraving indistinct. Fractured.

7. 74 pieces of gold necklace, $\frac{3}{4}''$ wide. Each piece is hollow and pierced laterally at both ends. (Pl. XXII *b.*)

8. Pieces of turquoise paste and crystal cut *en cabuchon* and flat, in various designs. These as well as the gems enumerated above, appear to have been used for inlaying.

9. 21 silver coins of Pahlava kings. Cf. Coin List, Nos. 27-47.

In addition to these a large number of copper and other antiquities were discovered in this building, chief among which were :—

1. Circular limestone plaque, $6\frac{1}{2}''$ diam., divided by cross into compartments. In centre are the busts of a male and female embracing and holding a cup. In the compartments around are rosettes and leaves disposed alternately. The side of the plaque is broken. (Pl. XXIII *a.*)

2. Ditto, circular, $3\frac{3}{4}''$ in diam. The centre is divided into three panels, of which the upper contains a fish-tailed winged monster attacked by a crocodile. The two lower panels are adorned with leaf design and the margin with cross hatchings. (Pl. XXIII *b.*)

3. Terracotta pillar, $6\frac{1}{4}''$ high, with Corinthian capital, and circular moulded base. The shaft is relieved by a moulded band near its middle and the flutings take the form of eight countersunk panels above and below this band. (Pl. XXIII *c.*)

4. Copper jug, $13\frac{1}{2}''$ high, provided with ornamental handle and lid attached to handle by chain. (Pl. XXIII *d.*)

5. Circular limestone plaque, 5″ across. In centre, winged griffin in relief. In exergue, incised lines suggestive of petals. In margin, incised hatchings. (Pl. XXIII *e.*)

6. Copper female figurine, standing cross-legged, $1\frac{1}{4}''$ high. Wears circular cap. Apparently a stopper. (Pl. XXIV *a*, 1.)

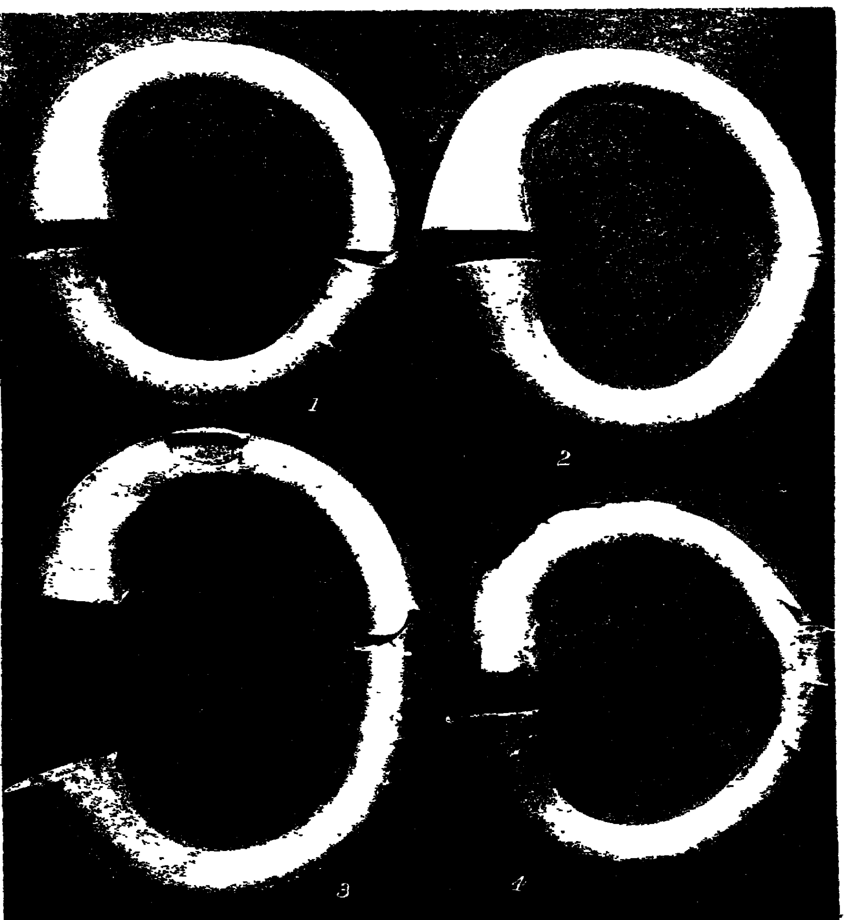
7. Ditto, $2\frac{1}{2}''$ high. Hair arranged in two strands at back. Crude workmanship. (Pl. XXIV *c*, 3.)

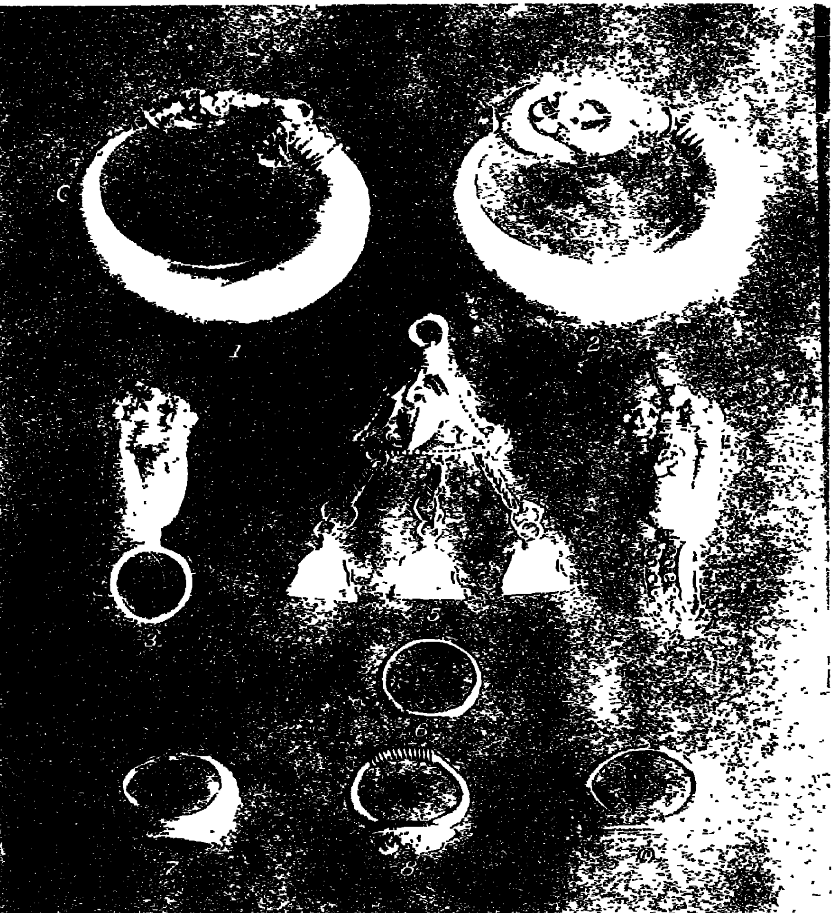
8. Copper ornament, $2\frac{1}{8}''$ across, composed of three circles and leaf-like design between. (Pl. XXIV *a*, 2.)

9. Similar, $1\frac{7}{8}''$ across, but with projections on outer rim of two circles and sinking for paste inlay in leaf-shaped device. (Pl. XXIV *a*, 8.)

10. Similar, $1\frac{5}{8}''$ across. (Pl. XXIV *c*, 13.)

11. Copper pendant, 1″ long, shaped beneath like a *triśūla*. (Pl. XXIV *a*, 3.)





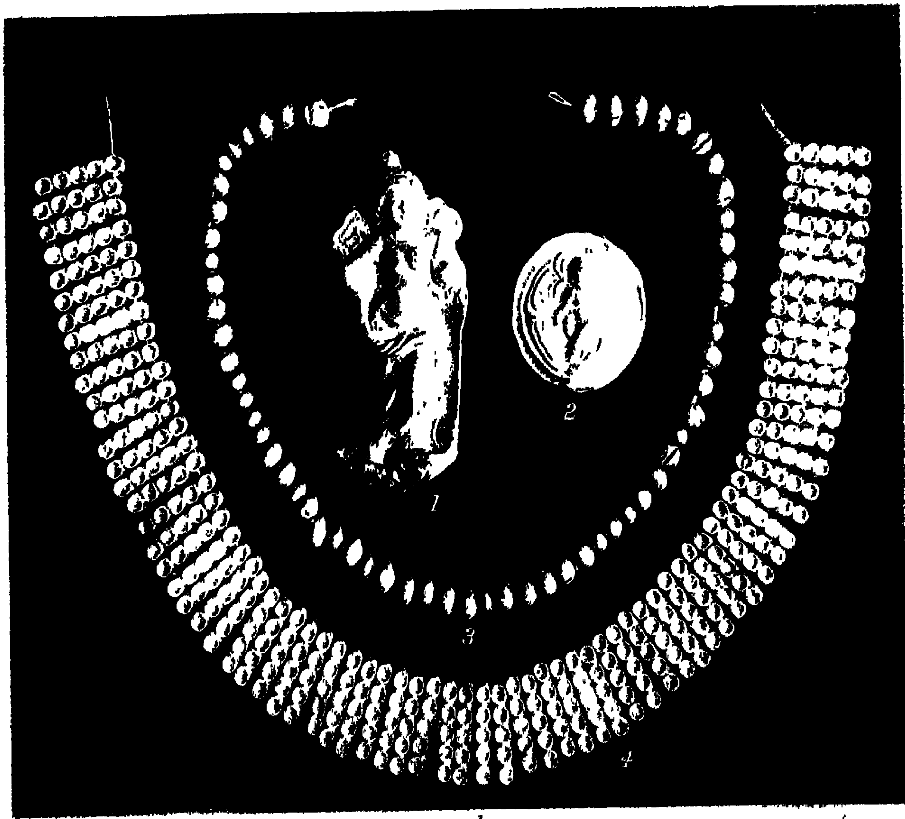
a & *b*. GOLD JEWELLERY FROM SIRKAP.

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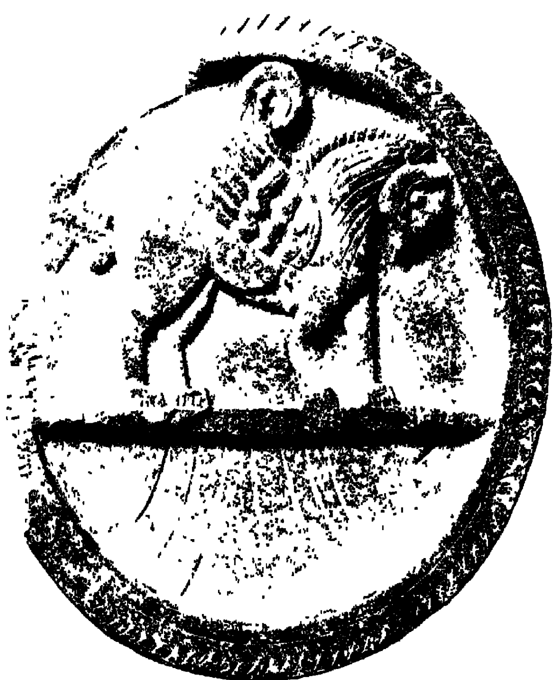
EXCAVATIONS AT TAXILA.



a.



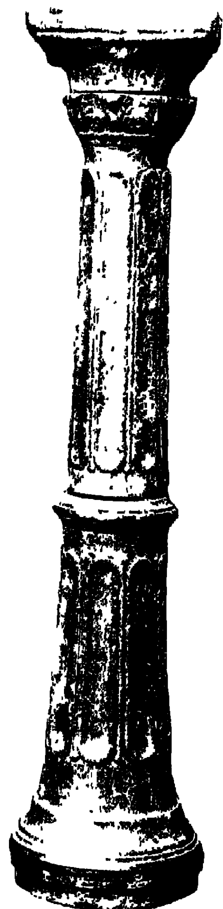
b.



a



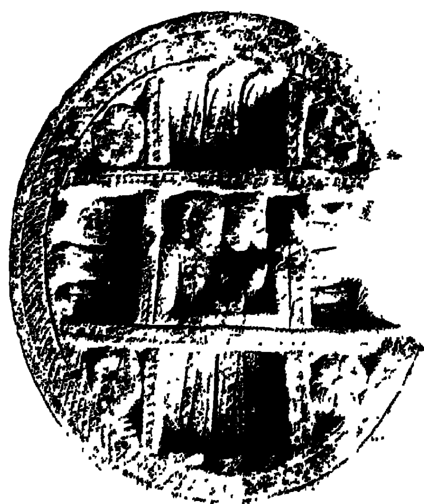
b



c.



d.



e.

a-e. MISCELLANEOUS OBJECTS FROM SIRKAP.

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12. Copper stopper, in form of cock, $1\frac{5}{8}''$ high. (Pl. XXIV *a*, 4.)
13. Similar, $1\frac{1}{4}''$ high. (Pl. XXIV *a*, 6.)
14. Copper bangle, $3\frac{1}{4}''$ across. (Pl. XXIV *a*, 5.)
15. Copper hair pin, $2\frac{1}{2}''$ long, with flat crescent shaped head. (Pl. XXIV *a*, 7.)
16. Ditto, $2\frac{5}{6}''$ long, with crescent inverted. (Pl. XXIV *a*, 9.)
17. Ditto, $4\frac{1}{4}''$ long. Circular head inlaid with ivory. (Pl. XXIV *c*, 5.)
18. Ditto, $1\frac{3}{4}''$ long, with head in form of *pipal* leaf. (Pl. XXIV *c*, 6.)
19. Ditto, $\frac{1}{2}''$ long, crescent shaped head. Damaged. (Pl. XXIV *c*, 7.)
20. Ditto, $3\frac{5}{8}''$ long, with flat lead shaped head. (Pl. XXIV *c*, 11.)
21. Copper spoon, $6\frac{7}{16}''$ long with handle terminating in device of *pipal* leaf set in circle. (Pl. XXIV *b*, 7.)
22. Ditto, $5\frac{7}{8}''$ long. Part of handle missing. (Pl. XXIV *b*, 3.)
23. Antimony rod, $5\frac{1}{8}''$ long, of lead. (Pl. XXIV *b*, 2.)
24. Ditto, $5\frac{3}{8}''$ long, of copper. (Pl. XXIV *c*, 8.)
25. Ditto, $4\frac{3}{4}''$ long, of copper. (Pl. XXIV *c*, 12.)
26. Copper handle of spoon, $3\frac{1}{4}''$ long, terminating in cloven hoof. Cf. Pl. XX, 1. (Pl. XXIV *c*, 9.)
27. Ditto, $4\frac{5}{8}''$ long, terminating in ring. (Pl. XXIV *c*, 1.)
28. Ditto, $\frac{7}{8}''$ long, terminating in *pipal* leaf device. (Pl. XXIV *c*, 2.)
29. Ditto, $1\frac{1}{4}''$ long, terminating in (?) bell device. Damaged. (Pl. XXIV *c*, 4.)
30. Handle of vessel, $3\frac{3}{4}''$ long and $2\frac{1}{2}''$ across. (Pl. XXIV *c*, 10.)
31. Two copper stands for vases, $1\frac{3}{4}''$ high and $2\frac{5}{8}''$ across. In the illustration these pedestals are shown upside down. (Pl. XXIV *d*.)

Before closing my description of this block of buildings, it remains for me to notice the remains of a small *stūpa* of somewhat exceptional interest, erected on the débris of chamber **B**[2], at a height of about 5′ above the floor lĕvel of the latter. The *stūpa* was constructed with a core of rubble, faced with *kañjūr* ashlar masonry, and finished with a bold acanthus ornament worked in thick lime stucco and painted. An unusual feature of this acanthus design is that the leaves point downwards instead of upwards, thereby losing much of their effectiveness. From the illustration in Plate XXV it will be seen that the dome of the *stūpa* had fallen bodily from its pedestal, but that in spite of its weight and the absence of mortar the bulk of it had held well together. To judge by the stratum to which it belonged, as well as by its style, it appears to have been built about the same time as the apsidal temple described above, that is, in the 1st century A.D.

Blocks F and G.

The next two blocks, **F** and **G**, are almost entirely of the Śaka period, only a few of the walls so far exposed belonging to other strata. As usual, they are planned on the principle of the open courtyard flanked or surrounded by chambers, several such courts being comprised in one house (Pl. XXV *b*). But in these, as well as in the majority of other houses at Taxila, there is a peculiar feature which renders their plans more difficult to comprehend than they would otherwise be. I refer to the entire absence of any doorways in the chambers on the ground-floor, the practice of the occupants having apparently been to enter these chambers by stairways or ladders descending from the rooms above. This practice is alluded to by Philostratus

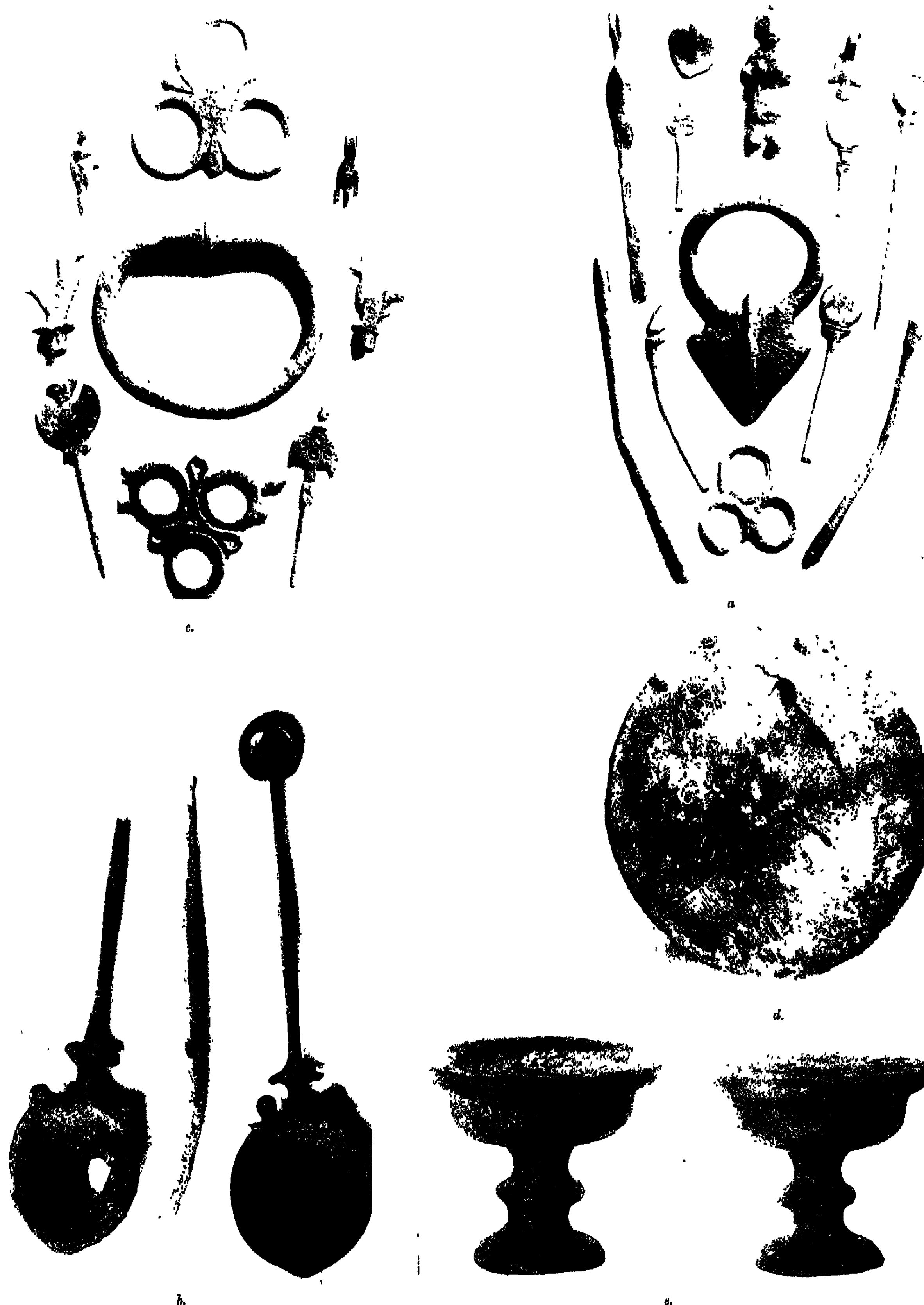
in his biography of Apollonius of Tyana, who is reputed to have visited Taxila about the year 44 A.D. His words are : *κατεσκεύασταί τε οἰκίαις, ἐι μὲν ἔξωθεν ὁρῴη τις αὐτάς, ἕνα ἐχούσαις ὄροφον, εἰ δ'ἔσω παρελθοι τις, ὑπογείοις ἤδη καὶ παρεχομέναις ἴσα τοῖς ἄνω τὰ ὑπὸ τῇ γῇ.* The lower floor of the houses is not, as a matter of fact, actually underground, but anyone seeing only a single row of windows from the street and having to descend from the upper to the lower chambers, which were unprovided with doors or windows, might well be excused for calling them underground cellars.

To revert, however, to the buildings F and G. Both these blocks are distinguished by the presence of a small shrine in the centre of a courtyard facing westward on to the main street. The shrine in block F (Pl. XXVI and XXVII *a*) consists of a rectangular base measuring 21′ 10½″ north and south, and 26′ 10½″ east and west, including the projection for the steps on its west side. It is constructed of a core of rubble faced with *kañjūr* blocks. Round the foot of the base runs a well-cut moulding consisting of a torus and scotia divided by a fillet, above which is a series of pilasters surmounted by brackets with a frieze and dentil cornice at the top. The sides and back of the *stūpa* are less ornamental than the front. On the two sides the central pilaster has a circular shaft; those flanking it are square with capitals consisting of plain mouldings, except at the eastern corners where the capitals are of the Corinthian order. On the front façade of the building all the pilasters are Corinthian, two having rounded and the remainder flat shafts. The interspaces between these pilasters are relieved by niches of three varieties. The two nearest the steps resemble the pedimental fronts of Greek buildings ; those in the centre are surmounted by ogee arches like the familiar 'Bengal' roofs ; and those at the corners take the forms of early Indian *toraṇas*, of which many examples are portrayed on the sculptures of Muttra.[1] Perched above each of the central and outer niches is a bird, apparently an eagle, and it will e observed from the photo on Plate XXVII that one of these eagles is double-headed. The presence of this motif at Taxila is interesting. It is known to occur for the first time in Hittite sculptures from Western Asia ; and it is found, also, on an early ivory of the Geometric period from Sparta. But later on it seems to be especially associated with the Scythians, and we may well believe that it was the Scythians who introduced it at Taxila. At a still later date it was adopted into the Imperial Arms of Russia and Germany.

The whole facing of *kañjūr* stone, including mouldings and other decorations, was originally finished with a thin coat of fine stucco, and, as time went on, numerous other coats were added, several of which showed traces of red, crimson and yellow paint.

The upper part of the shrine has completely fallen, but various architectural members were recovered in the débris, which make it possible to reconstruct the design of the superstructure. In the centre of the base was a high drum surmounted by a dome, which was crowned, in turn, by three umbrellas. Both drum and dome were probably adorned with decorations executed in stucco and painted. At the edge of the steps and round the base of the *stūpa* was a low wall decorated on the outside with the usual Buddhist railing, parts of which were found in the courtyard below. A good idea of the appearance of the *stūpa*, when intact, may be obtained from a relief

[1] Cf. V. A. Smith, *Jain Stūpa and Other Antiquities of Mathura*, Pl. XII.



a–e. MISCELLANEOUS OBJECTS FROM SIRKAP.

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EXCAVATIONS AT TAXILA

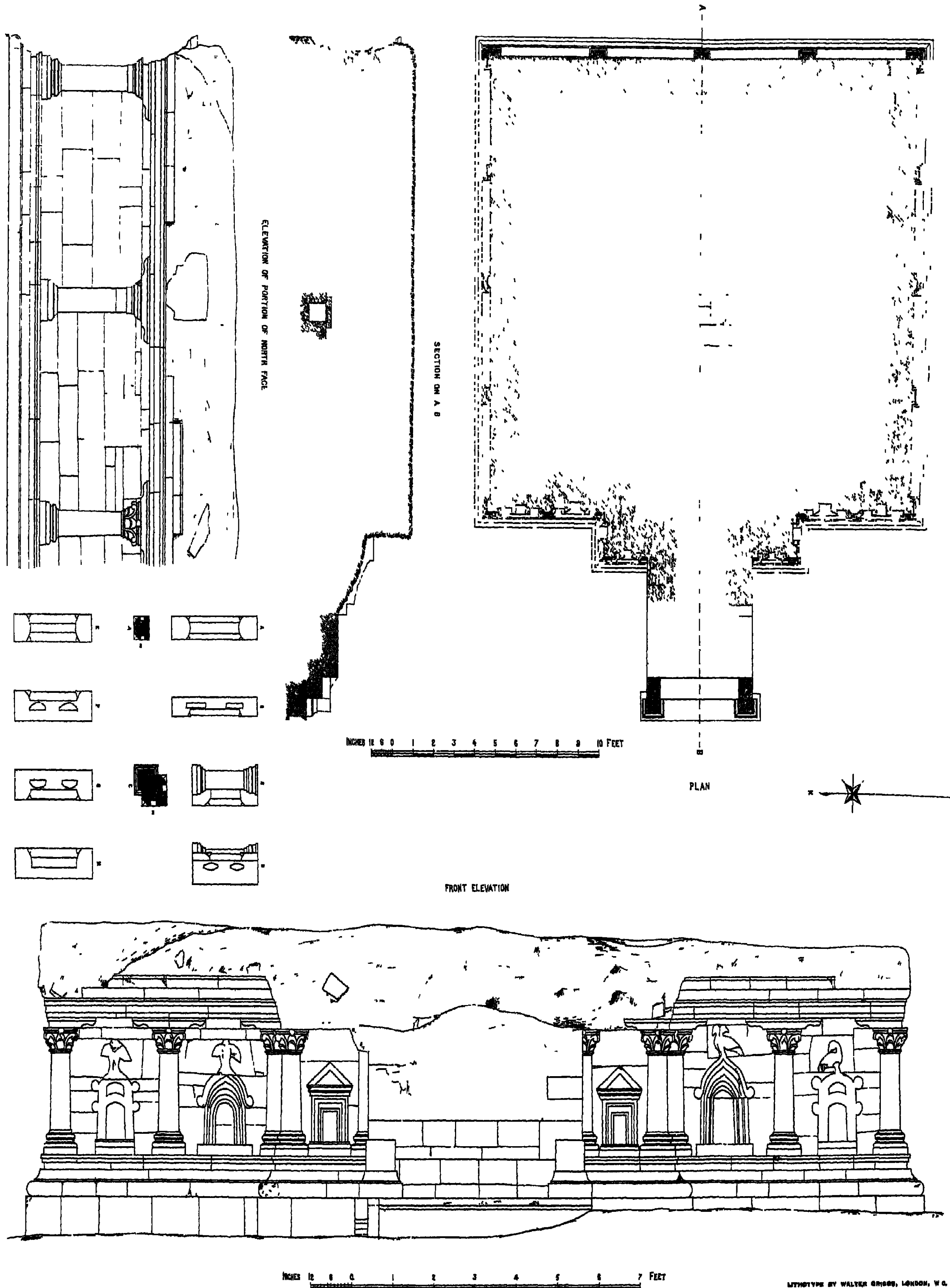


a. SIRKAP: FALLEN STUPA WITH ACANTHUS LEAF DECORATION.



b SIRKAP: BLOCKS F AND G, GENERAL VIEW FROM N.N.W.

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LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

SIRKAP: PLAN AND ELEVATION OF SHRINE I.

of the Muttra School published in V. A. Smith's *Jain Stūpa and Other Antiquities of Mathura* (Pl. XII), which appears to have been executed at no great length of time after the erection of this building. But in this relief the style of the *stūpa* is more pronouncedly Indian than the *stūpa* in Sirkap. In the latter, the whole basis of the decorative design is Hellenistic, the mouldings, pilasters, dentil cornice and pedimental niches being all classical, while the only Indian features are such subsidiary details as the *toraṇa*, the ogee-arched niche, and the brackets above the pilasters. It is noteworthy that these last have a curvilinear form, while the brackets of a later period have only a notch cut near their extremities.

It remains to add that the chamber containing the relics in this *stūpa* was set in the centre of the base at a depth of 3′ 2″ below its top. The chamber, which had been rifled in days gone by, is 8½″ square by 10″ deep, and built of four squared *kañjūr* blocks with a fifth covering them. Close by the south side of the staircase is a small square plinth, the purpose of which is doubtful. A plinth of a similar kind occurs at the shrine in block G and at the bigger tope at Jandiāl. Judging from their superficial character it seems hardly likely that they were intended to sustain the weight of a column. They may, perhaps, have served as the bases of small altars or lampstands.

Block G.

The *stūpa* in block G, which is separated from block F by a narrow side street, is smaller and less pretentious than the one described above (Pl. XXVIII and XXIX *c*). It measures 20′ east and west including the steps, and 13′ 9″ north and south, the base being 3′ 9½″ high. The pilasters, which are five in number on each side of the base, are flat, with capitals made up of several horizontal mouldings. The moulding round the foot of the *stūpa* consists of a torus and scotia, and on it rest directly the bases of the pilasters, without the intervening course which is present in the other shrine. The cornice above the pilaster is relieved by a 'bead and reel' moulding, but is devoid of dentils. The shrine is ascended by a flight of five steps on the west, adjoining the foot of which on both sides were two small bases of *kañjūr* stone, which may have supported altars, fonts or lamps. The design of the whole *stūpa* is similar to that in block F, but the ornamentation is relatively flat and coarse and lacking in vitality.

Of the circular superstructure of this *stūpa* only two stones, belonging to the lowest ring of the drum, remain *in situ*. In the centre of the base, at a depth of about 4′ from the top, was a small relic chamber, measuring 9″ square by 7″ deep and composed of *kañjūr* blocks stuccoed over. Within this chamber was a steatite casket containing 8 copper coins of Azes I, and a smaller casket of gold in which were found a few pieces of calcined bone, and the beads, etc., enumerated below :—

1. Steatite relic casket, 2¼″ high, decorated with lotus petals on the body and lid. (Pl. XXIX *a*.)
2. Gold casket, ⅞″ high. Lenticular shape, without decoration. (Pl. XXIX *a*.)
3. Small ring of gold wire, ⅜″ across. Ends intertwined.
4. Cornelian pendant in form of ram, 1⅛″ from back to front. (Pl. XXIX *a*.)
5. Agate, barrel-shaped bead, 5/16″ across.
6. Cornelian lenticular bead, ¾″ diam.
7. Two pieces of gold leaf.

Among the architectural remains found in the débris of this *stūpa* were a number of railing pillars, cross-bars and coping stones, and pieces of two or more free-standing columns. These columns stood on the corners of the *stūpa* base on low square plinths, one of which, along with a small portion of the railing, still remains *in situ* at the north-east corner. What remains of them consists of the following:—(*a*) two pieces of rounded shafts measuring respectively, 6′ 6″ and 5′ 4″ in length, with diameters of 1′ 4½″ and 11½′ at their lower ends; (*b*) two Persepolitan bell-shaped capitals, 1′ 1″ high; and (*c*) a crowning lion, 1′ 6″ from head to tail. All these pieces are of *kañjūr* stone, roughly chiselled and coated with stucco in several layers, on which are traces of red and yellow paint. In the Mathura relief[1] referred to above, similar columns are depicted on each corner of the *stūpa* base, and it is probable that here also there were originally four of these columns, though the remains of two only now survive.

Of the objects discovered in blocks F and G the following deserve mention:—

1. Circular soapstone plaque, 5¼″ in diam., bisected by a narrow band in the middle. In the upper half is a relief of a man dancing with two women, one on either side. The lower compartment is empty. The dividing band is adorned with incised lines and the rim of the plaque with two concentric circles. (Pl. XXIX *b.*)

2. Circular limestone disc, 6⅝″ in diam., with boss, relieved by three incised concentric circles, in centre. Turned on lathe. (Pl. XXX *a.*)

3. Bone die, $\frac{7}{16}$″ long, with 1, 2, 3 and 4 concentric circles on its four sides. (Pl. XXX *b*, 2.)

4. Cylindrical bone object, 2⅛″ long, hollow in the centre, turned on lathe and adorned with incised rings. (Pl. XXX *b*, 1.)

5. Ditto, 2¾″ long, decorated with rings and cross hatchings. (Pl. XXX *b*, 3.)

6. Bone object ending in trident. $2\frac{11}{16}$″ long. (Pl. XXX *b*, 4.)

7. Bone needle, 5½″ long. (Pl. XXX *b*, 5.)

8. Goblet of limestone, 6⅛″ high and 4½″ across mouth. Decorated with lotus design surmounted by a double row of rosettes between borders. (Pl. XXX *d.*)

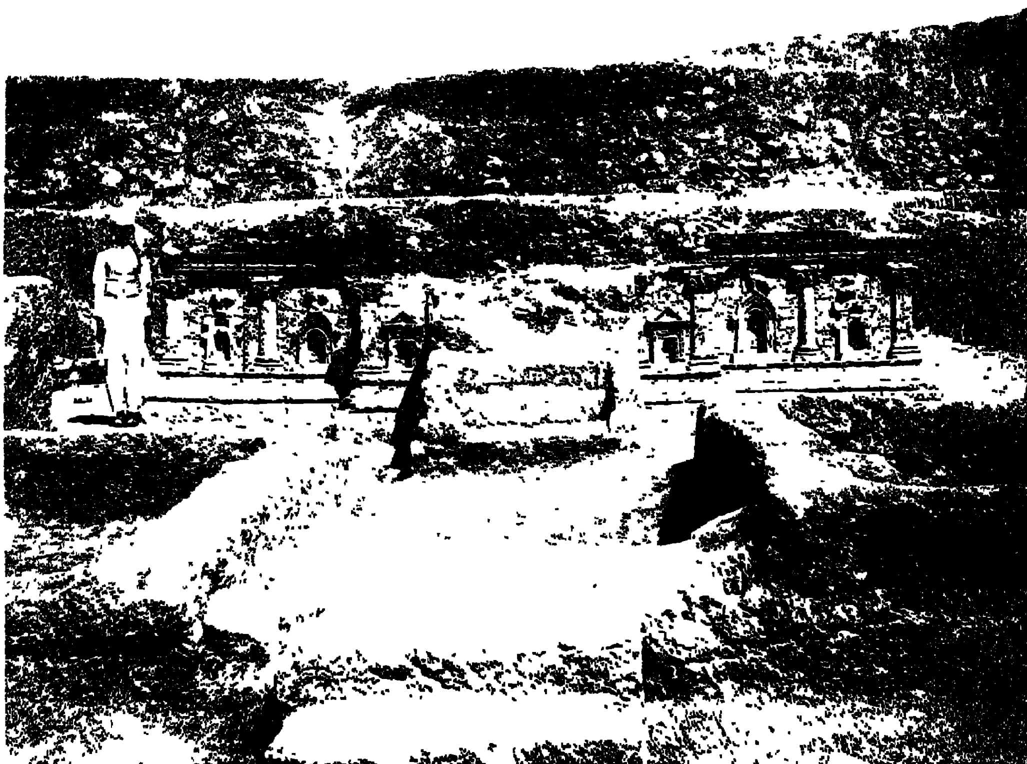
9. Casket of limestone, 4½″ high, including lid. The lid is adorned with a lotus petal design, the body of the casket with rings raised and incised. (Pl. XXX *e.*)

10. Ditto, without lid, 3⅜″ high. Adorned with lotus petal design. (Pl. XXX *f.*)

Block P. Palace.

The last and largest of all the buildings in Sirkap which I have to describe, is block P, which is situated further south and nearer the foot of Hathiāl. It stands almost at the corner, where the two streets from the North and West Gates must have met, and thus occupies a most commanding position in the lower city. Its spacious dimensions leave little room for doubt that it was a royal palace (Pl. XXXI and XXXII). So far as it has been excavated, it measures from west to east 250 feet and from south to north 352 feet, including a stretch of the front wall, which is not shown in the plan. Towards the east and north the palace buildings are still continuing. The walls for the most part are constructed of a rough rubble masonry, which was the immediate precursor of the smaller diaper type, and they have been subsequently repaired in masonry of the same style. In courts of special importance,

[1] V. A. Smith, *Jain Stūpa and Other Antiquities of Mathura*, Pl. XIII.



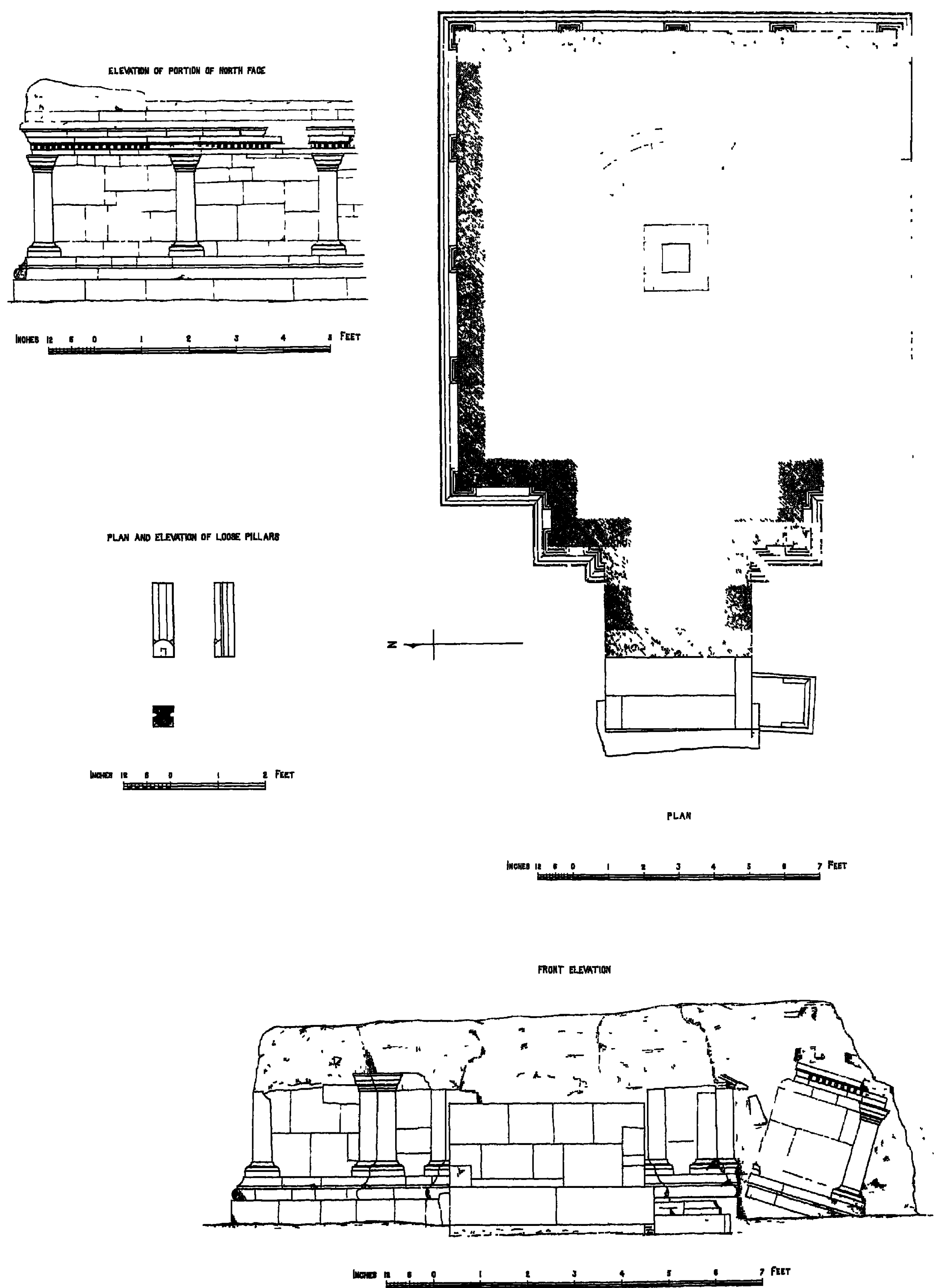
a SIRKAP: SHRINE I, FRONT VIEW.



b. SIRKAP: BLOCKS F AND, G, WITH SIDE STREET BETWEEN.

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EXCAVATIONS AT TAXILA.



LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

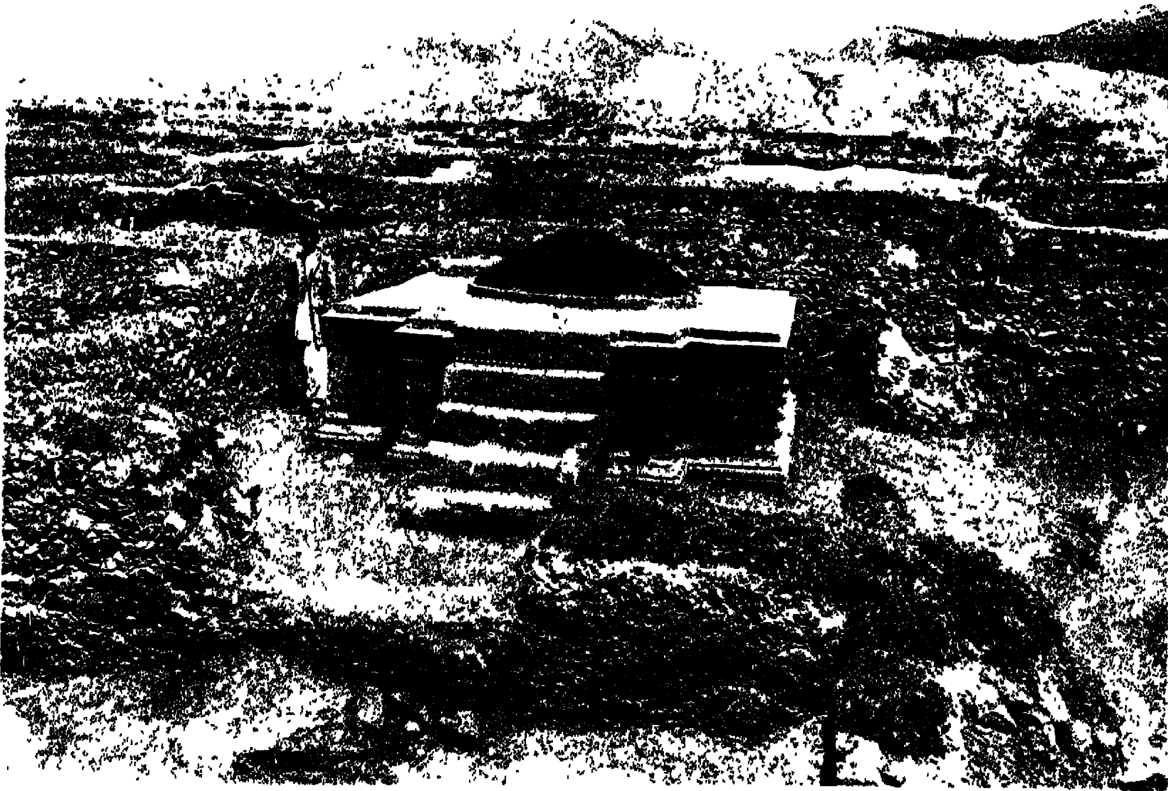
SIRKAP: PLAN AND ELEVATION OF SHRINE II.



a. SIRKAP: RELIC CASKETS FROM SHRINE II.

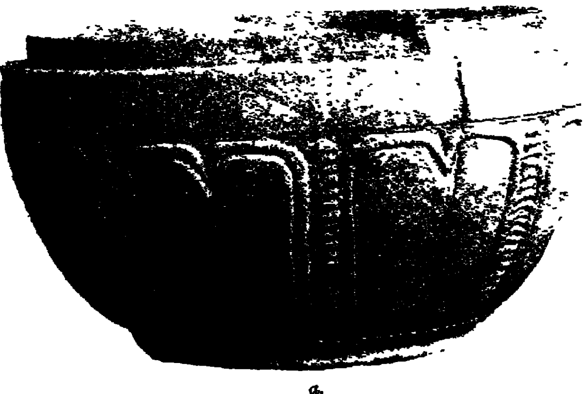


b. STONE DISH FROM BLOCK F.



c. SIRKAP, SHRINE II: FRONT VIEW FROM W.

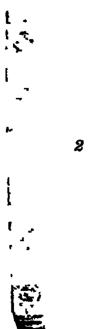
LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.



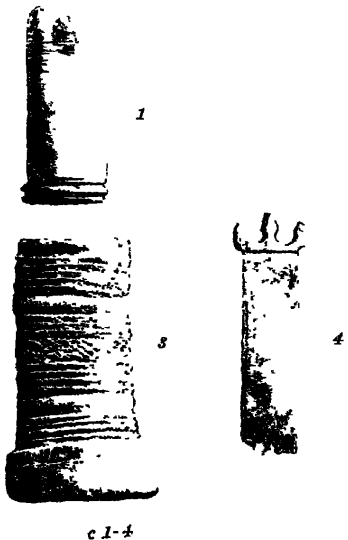
a.



b.



2



1

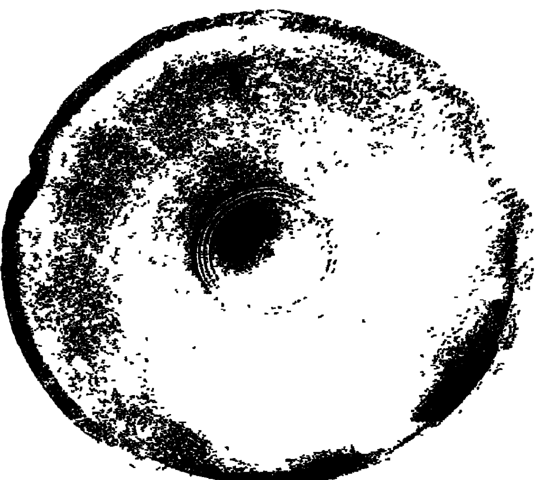
3

4

c 1-4

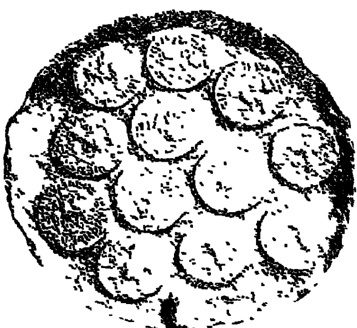


d.



e.





f

a-f. MISCELLANEOUS OBJECTS FROM SIRKAP.

LITHOTYPE BY WALTER GRIGGS LONDON W.C.

as, for instance, in the large court marked C'^{12}, a facing of ashlar *kañjūr* stone is also employed, while the door-lintels and thresholds consist of heavy blocks of limestone. In many of the courts and rooms perpendicular chases indicate that beams were let into the walls, to which wooden panelling could be affixed.

So far as it has been exposed, the palace consists of five series of apartments arranged in groups around a central court. The large court in the centre of the west side, together with the chambers round about it, I take to have contained the chief living rooms, one of which, B'^{6}, is a bathroom with a small tank in the middle and a channel to carry off the water. The tank is constructed of five square limestone and *kañjūr* blocks. The central court is paved with irregular blocks of limestone, and on its southern side is a raised daïs, 3′ 8″ high above the floor level. This daïs occupied nearly the whole of the west side of the court, with a frontage of 27′ 10″ and a depth of 20′ 5″. The front of the daïs is faced with squared blocks of *kañjūr*, in which six perpendicular chases are cut for the reception of wooden beams, and is crowned with a coping of heavy limestone blocks. To the south of this court is a smaller court, C'^{16}, with chambers round about, which probably served for the retainers and guard. At this, namely, the south-west corner of the palace, is a chamber, A^{25}, with exceptionally strong walls, no entrance to which exists on the ground floor. I take it to have been a tower at the corner of the palace, access to which was gained only from the first floor. On the opposite or north side of the main court is another large group of chambers, which I identify with the zenana apartments for women, separated from the rest of the palace by substantial walls. These zenana apartments appear to extend over most of this side of the palace, but the excavation of them has not yet been completed. Beyond them, again, to the north are other apartments, which appear to be an extension of the palace, added later. On the east side of the palace are two more groups of apartments. The group on the south consists of a spacious court with chambers on the west and a raised daïs, which no doubt supported an open hall, on the south. This court I assume to have been used for semi-official or public purposes, the rooms around it doing duty as offices.[1] Leading off from this court on itsnorth side is another group of apartments which probably served as reception rooms for guests. The rooms in this court are less regularly built and somewhat smaller than in the rest of the palace. Moreover, their plan, at any given date, is not quite certain, for the reason that there are two periods of building represented, and it is not in every case at present possible to distinguish them. Further excavations, however, will probably remove this difficulty. In the meantime, the reader must understand that all the walls shown in the plan do not belong to the same period. The interior walls in this part of the palace are standing to a height of 2′ or 3′ only. In the rest of the palace they are standing considerably higher, *viz.*, as much as 6′ or 7′ above the foundations. From west to east, let it be added, the foundations of the palace rise with the slope of the ground, but in the interior of the palace the floors of the various courts and chambers were levelled, and the slope negotiated by means of steps leading up from one chamber to another.

[1] The one would be the Dīwān-i-'Āmm, and the other the Dīwān-i-Khāṣṣ.

From the foregoing description it will be clear that, although this palace is considerably larger and built more substantially than the private houses, there was nothing at all pretentious in its planning or sumptuous in its adornment. This is a feature which is specially commented on by Philostratus, who says, when speaking of the palace:—*περὶ δὲ τὰ βασίλεια οὔτε ὄγκον ἰδεῖν φασιν οἰκοδομημάτων .... καὶ γὰρ τοὺς ἀνδρῶνας καὶ τὰς στοὰς καὶ τὴν αὐλὴν πᾶσαν κεκολάσθαι φασίν.* These remarks of Philostratus are valuable as affording another proof of the substantial correctness of his account of Taxila, which, as we have already seen, found somewhat remarkable corroboration in the peculiar character of the private houses.

In spite, however, of the palace being so bare and unadorned, its remains are singularly interesting, if only for the sake of the plan they disclose—the first plan of a building of this kind which has yet been recovered in India; and this interest is still further increased, when we realise that, so far as it has been exposed, the plan bears a striking resemblance to those of the Assyrian palaces of Mesopotamia. This will best be understood by comparing it with the plan and bird's eye view of the palace of Sargon at Khorsabad published by Perrot and Chipiez in their *Histoire de l'Art antique*, Tome II, Pl. V. Here, it will be seen, we have the same great court surrounded by chambers, and, on the one side of it, the same court for retainers; on the other, the apartments of the zenana. Here, also, we have the other half of the palace occupied, just as it is at Taxila, by reception and public rooms. In the palace of Sargon there is another block of apartments further out on this side, at the point where some more chambers are also beginning to appear in the palace at Taxila. The *zikurrat* tower, which in the palace of Sargon was placed at the side of the zenana, is a feature which appertains peculiarly to the Assyrian religion, and it is questionable whether it found a place in the Taxila Palace. On the other hand, it may prove, as the excavation advances, that its place was taken by some other sacred edifice. That a palace at Taxila of the Greek, Śaka or Pahlava period should have been planned on the same lines as an Assyrian palace of Mesopotamia need, of course, occasion no surprise, when we bear in mind the vitality and persistence of the influence which Assyria exerted upon Persia, Bactria and the neighbouring countries. But it certainly gives an added interest to these buildings and helps us in our efforts to disentangle the archæological problems of this period.

The small antiquities found in this palace consist in the main of potteries and coins of the Pahlava period found in the débris inside the chambers. A few coins of Hermæus and Kujūla Kadphises were found in the uppermost stratum, but no coins of any other Kushān king. These coins, coupled with the character of the masonry construction, indicate that the repairs and additions to this palace were carried out in the early decades of the 1st century A.D., while the original building may be assigned to the Śaka epoch. One discovery of special interest which deserves mention here, is that of a number of earthenware moulds for casting coins (Pl. XXX *c*), which were found in a room or shop just outside the palace and near its south-west corner. The coins, of which the impress is clear in many of the moulds, are those of Azes II. Probably the moulds belonged to the plant of some forger of the Pahlava epoch. Eight of them are complete and twenty broken. The following is a list of the better preserved ones.

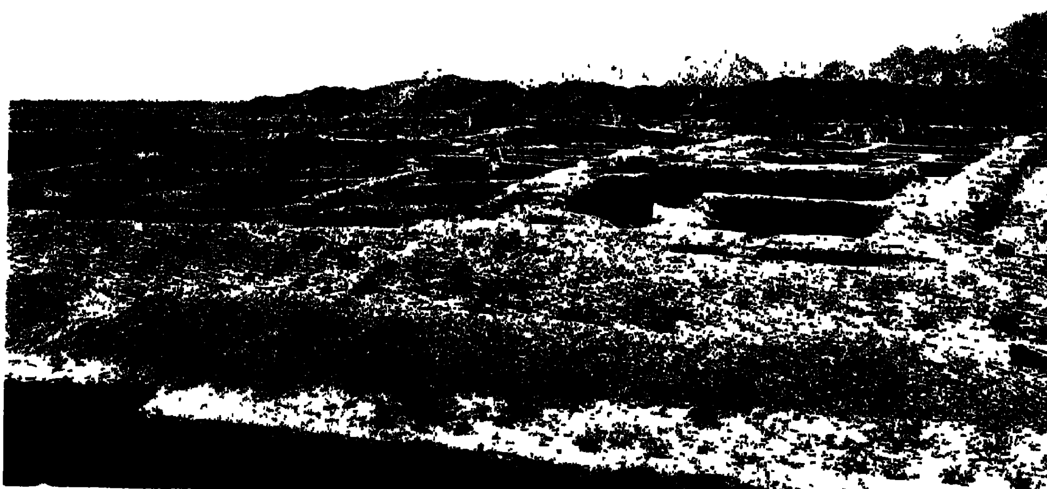
BLOCK. P



SIRKAP: PLAN OF BLOCK P.



a SIRKAP: GENERAL VIEW OF EXCAVATIONS FROM S.W.



b. SIRKAP, BLOCK P: GENERAL VIEW FROM S.W.

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1. Circular mould, 4″ in diam. containing 12 impressions. Eight of these represent king Azes II on horseback; the rest show Pallas, with spear and shield or some other deity. (Pl. XXX *c*, 1.)

2. Ditto, with 10 impressions. Five appear to be those of Pallas and four of Zeus l., holding Nike in extended r. hand. (Pl. XXX *c*, 2.)

3. Ditto, with 6 impressions, all representing King Azes on horseback.

4. Ditto, with 6 impressions, two of which contain the figure of Pallas r., and four the figure of Zeus l., holding Nike in extended r. hand.

5. Ditto, with 6 impressions as in 4.

6. Ditto, with 12 impressions, nearly all of which represent King Azes on horseback.

7. Fragment of circular mould, with two impressions of Pallas r.

8. Ditto, with four impressions, all representing King Azes on horseback.

In addition to these moulds there were found in the same spot an oval cornelian pendant in the form of an elephant, ½″ across, and a terracotta seal-die with a Kharoshṭhī legend of ten letters.

Jandiāl.

Temple.

From Sirkap we pass over the northern ramparts of the city and through the outworks known as "Kachcha koṭ" to the two lofty mounds in Jandiāl, between which the ancient road to Hasan Abdal and Peshawar probably ran. The mound to the east of the road, which rose to a height of some 45 feet above the surrounding fields (Pl. XXXIV *a*), was superficially examined by Gen. Cunningham in 1863-64. Gen. Cunningham states that he discovered three walls of a large building at a depth of 7′ or 8′ below the surface, and he surmised that these walls represented the remains of an ancient temple. Curiously enough, the General was correct in believing that an ancient temple lay concealed in this mound, but the walls which he unearthed belonged to a comparatively late building of the mediæval epoch, the purpose of which is quite uncertain, the ancient temple, which I have now laid bare, being found at a depth of some 8′ or 9′ below it.

The position of this temple is a very commanding one, standing as it does on an artificial mound some 25′ above the surrounding country and facing southwards opposite the north gate of the city of Sirkap. Its length, including the projection in front of the portico to the back wall, is 158′ and its width 85′ (Pl. XXXIII). Its plan is unlike that of any temple yet known in India, but its resemblance to the classical temples of Greece is striking. The ordinary Greek peripteral temple is surrounded on all sides by a peristyle of columns and contains a *pronaos* or front porch, a *naos*, cella or sanctuary, and, at the rear, an *opisthodomos* or back porch, known to the Romans as the *posticum*. In some temples, such as the Parthenon at Athens or the Temple of Artemis at Ephesus, there is an extra chamber between the sanctuary and the back porch, which in the case of Parthenon was called the "Parthenon" or chamber of the virgin-goddess Athene. In the newly excavated temple at Jandiāl the plan is almost identically the same. In place of the usual peristyle of columns is a wall pierced at frequent intervals by large windows, which admitted ample light to the interior, but at the main or southern entrance of

the temple are two Ionic columns *in antis*, *i.e.*, between pilasters, which received the ends of the architrave passing above them (Pl. XXXIV *b*). Corresponding to them on the further side of a spacious vestibule is another pair of similar columns *in antis*. Then comes, just as in Greek temples, the *pronaos* leading through a broad doorway to the *naos* (Pl. XXXV *c*), while at the back of the temple is another chamber corresponding to the *opisthodomos*. The only essential difference in plan between this and a Greek temple is that, instead of an extra chamber between the *opisthodomos* and the sanctuary, we have at Jandiāl a solid mass of masonry, the foundations of which are carried down over 20 feet below the floor of the temple. Judging by the depth of these foundations it may safely be concluded that this mass of masonry was intended to carry a heavy superincumbent weight and consequently that it must have risen in the form of a tower to a height considerably greater than that of the rest of the temple. Access to this tower was provided by flights of broad steps ascending from the *opisthodomos* at the rear of the temple and laid parallel

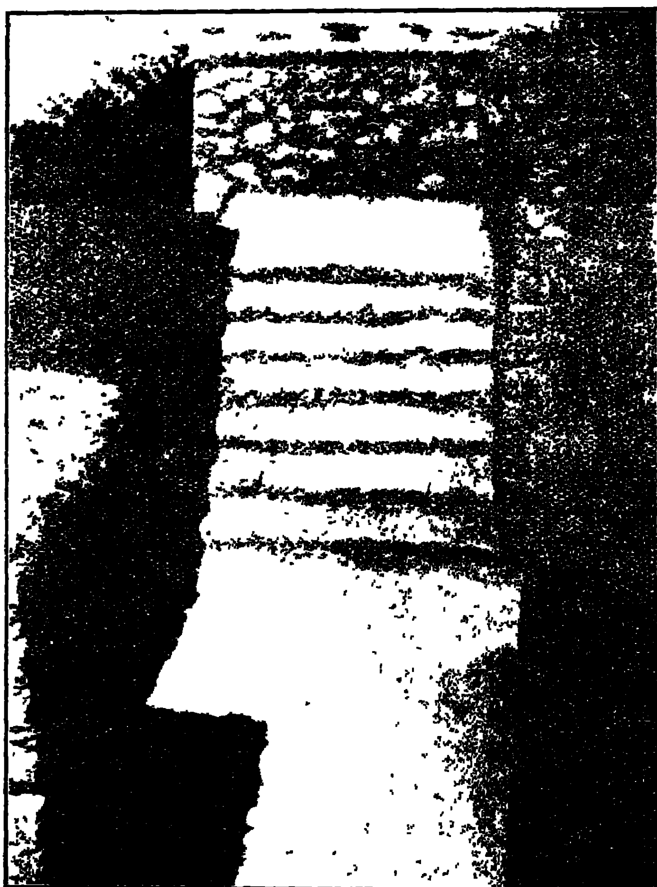
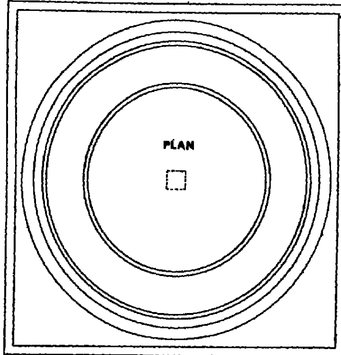


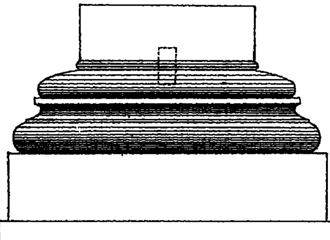
Fig. 2.

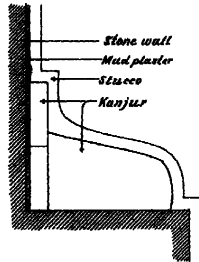
with the sides of the tower (Fig. 2). Two of these flights still exist, and it may be assumed that there were at least three more flights above them, probably narrowing in width above the roof of the main building. But what was the height of the tower, when complete, it is impossible to say, as it may well have been that the risers in the upper flights of steps were higher than those below. It may be surmised, however, that it rose to an altitude of about 40′.

DETAILS AT C.



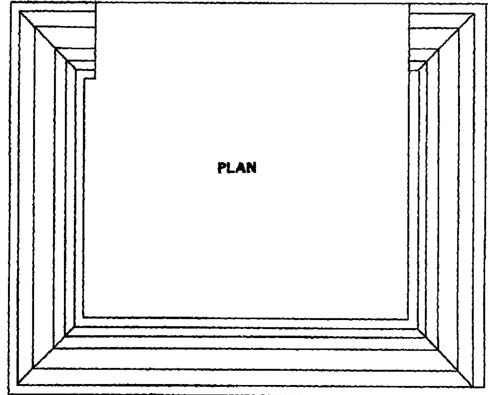
ELEVATION



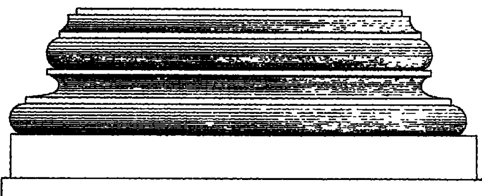


SECTION ON A.B.

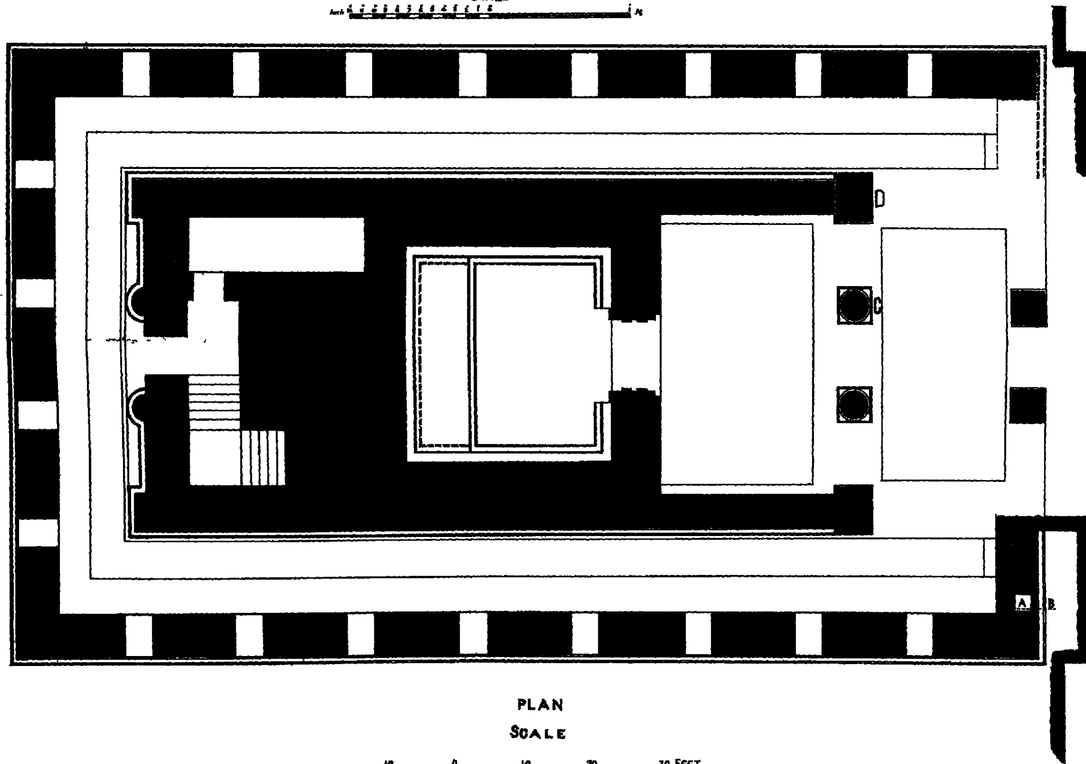
DETAILS AT D.



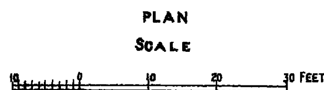
ELEVATION







PLAN



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PLAN AND DETAILS OF TEMPLE C, AT JANDIAL.

PLATE XXXIII.



a. JANDIAL: VIEW OF MOUND C BEFORE EXCAVATION.



b. JANDIAL: VIEW OF TEMPLE IN MOUND C AFTER EXCAVATION.

The walls of the temple are now standing to a height of between 9′ and 10′, and are built of somewhat irregular diaper masonry. In all cases they are carried on massive foundations descending to a depth of 9′ or 10′ below the floor level. In the case of the inner wall these foundations project from 6″ to 2′ beyond the base of the wall, but the outer walls are carried on still broader foundations, which project as much as 5′ beyond their inner face.

The masonry for the most part is of limestone, but the mouldings at the base of the walls, as well as the cornices, are composed of *kañjūr*. The base mouldings referred to run completely round the outside of the temple, round the inner wall of the *pradakshiṇa* passage, and round the interior of the *naos* or sanctum. They are in all cases of the ordinary Greek *cyma recta* form (Pl. XXXV *a*). The cornice in the *naos* is a plain *cavetto* moulding, running round the top of the *dado* at a height of 6′ from the floor (Pl XXXV *b*). The whole face of the walls inside and out, as well as their *kañjūr* mouldings, were finished off with stucco,[1] patches of which are still adhering at various points.

The Ionic columns and pilasters (Pl. XXXIII) are chiselled out of massive blocks of sandstone, the bases, shafts and capitals being built up in separate drums fixed together with square dowels let in the centre, as was also the case in Greek buildings. In the construction of columns in Greek temples it is well known that a fine joint was obtained by grinding down each drum in its bed. In the case of the Jandiāl temple the same process seems to have been followed, the beds of the drums being roughly chiselled at the centre, but a draft left at the edge which was afterwards ground down. The base mouldings of these columns are not very subtle in their outline, but their capitals with their "egg and dart" and "reel and bead" mouldings are of quite a pleasing form (Pl. XXXIX *c*). In several of the column and pilaster bases fractures have occurred owing either to the superincumbent weight or to faults in the stone, and these fractures have been repaired by cutting back the broken stones to a straight edge and dowelling on a separate piece by means of iron pins.

The mouldings, to which I have referred above, in the cella or sanctum extend round the foot of all four walls, and it is obvious from their existence along the north wall that, originally, this wall stood free down to its base. At a subsequent date, however, a platform, 8′ 2″ deep and about 3′ 6″ high, was added on this side of the chamber. This platform is built in the same style of limestone diaper masonry with mouldings of *kañjūr*, the whole faced with stucco. But the mouldings which adorn it are slightly smaller than, and of somewhat different outline to, those around the chamber. The door leading from the *pronaos* to the *naos* appears to have been of wood bound with iron, of which many fragments were found in the charred débris strewn over the floor, and the framework of this door was not, as is often the case, let into the stonework of the walls, but only imbedded in the thick plaster with which the face of the wall was coated.

The windows in the outer walls of the temple referred to above are, like the face of the walls, plastered with coarse stucco composed of small river stones and lime.

[1] The finer kind of stucco in India is, and apparently always has been, made of the lime obtained by powdering shells. It is commonly known as shell plaster. This I take to be the meaning of the term λίθου κογχυλιάτου of Philostratus.

At the back of the temple there were no stone columns, but only rectangular and semi-circular pilasters built of diaper masonry and crowned, perhaps, with stone capitals (Pl. XXXV *d*).

As to the superstructure of this temple, the architrave frieze and cornice were of wood and no doubt of the Ionic order, in keeping with the Ionic style of the columns, pilasters, and bold mouldings around the base of the walls. Of wood, too, was the roof construction, but the roof was not of the *hip* type usual in Greek temples. Had the roof been sloping, tiles must have been used on the outside, and some of them must inevitably have been found among the fallen débris. But there was not a trace of anything on the floor of the temple, except the great charred beams of wood, long iron nails, door hinges, and a thick layer of clay mixed with masses of plaster from the walls and charcoal. I conclude, therefore, that, save for the tower in the middle of the building, the roof of the temple was flat, like the roofs of most oriental buildings, and composed of half a dozen inches of earth laid over the timbers.

The following is a list of the few small finds which were made in this temple:—

1. Terracotta model of edifice, $2\frac{5}{8}''$ high. It is adorned with four niches alternating with crude Corinthian pilasters surmounted by *amalakas*. Mediæval workmanship (Pl. XXXIX *a*).

2. Terracotta figurine of woman, $2\frac{5}{8}''$ high, wearing long tunic and girdle in classic fashion; also short necklace and ear pendants. The face is mutilated and legs below knees missing.

3. Terracotta mould, 2″ diam., with impression of lion's head.

4. Terracotta rattle, $1\frac{15}{16}''$ high, consisting of circular base surmounted by horse's head.

5. Round bead of crystal, $\frac{7}{16}''$ diam.

6. Ditto of banded agate, $\frac{7}{16}''$ diam.

7. Ditto of cornelian, $\frac{5}{16}''$ across.

8. Cat's-eye bead with three facets, $\frac{5}{16}''$ across.

9. Barrel-shaped bead of garnet, $\frac{1}{2}''$ across.

10. Portion of shell bracelet, with beaded rim, 1″ long.

11. 3 lenticular shell beads, $\frac{3}{8}''$ across.

12. Shell pendant, $\frac{5}{8}''$ long. Slightly curved inwards.

To what faith this unique temple was dedicated, we can only surmise. That it was not Buddhist, seems patent from the total absence of any Buddhist images or other relics among its débris, as well as from its unusual plan, which is unlike that of any Buddhist chapel that we know of. For similar reasons, also, we must rule out the idea that it was Brahmanical or Jain. On the other hand, the presence of the lofty tower in the middle of the building and immediately behind the sanctum is very significant. My own view is that this tower was a sort of *zikurrat*, tapering like a pyramid and ascended in just the same way as the *zikurrats* of Mesopotamia. I conclude, too, that on the summit of this *zikurrat* was a fire altar [1] and that the whole edifice, in fact, was a Zoroastrian temple. This is the only plausible hypo-

[1] This fire altar was probably constructed of large sized bricks laid in mud. A number of these bricks were found on the staircase leading up to the tower.

PLATE XXXV.



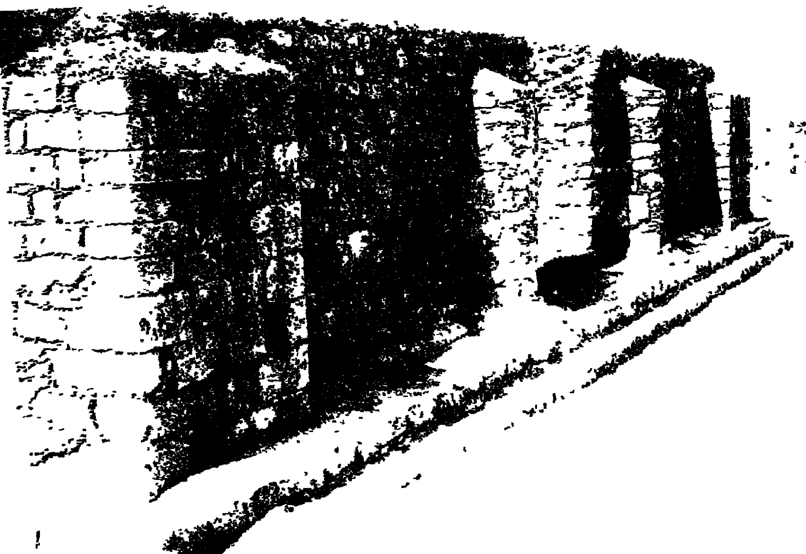
a. JANDIAL TEMPLE: PASSAGE ON WESTERN SIDE.



b. JANDIAL TEMPLE: INTERIOR OF SANCTUM FROM N.W.



c. JANDIAL TEMPLE: VIEW FROM S.E.



d. JANDIAL TEMPLE· VIEW OF BACK WALL.

LITHOTYPE BY WALTER GRIGGS LONDON, W.C.

thesis which seems to me to explain the peculiar structure of the solid tower in the centre of the building and the entire absence of images. The raised daïs which occupies the whole of one side of the sanctum may, I suggest, have served as the seat of the priests. The Persians, we know, set their fire altars in high places and raised on lofty substructures. We know, too, that the idea of the Assyrian *zikurrat* was familiar to the Persians, and there is nothing more likely than that they borrowed its design for their fire temples. Indeed, the *zikurrat* tower at Firuzabad has been thought by many authorities actually to be a fire altar. Moreover, in favour of my hypothesis, it must be remembered that this temple was constructed in the Parthian epoch, at a time when Zoroastrianism must certainly have had a strong foothold at Taxila.

It is not unlikely that the temple is identical with one described by Philostratus in his *Life of Apollonius*. His words are: *νεών δὲ πρὸ τοῦ τείχους ἰδεῖν φασιν οὐ παρὰ πολὺ τῶν ἑκατομπόδων λίθου κογχυλιάτου, κὰι κατεσκευάσθαι τι ἱερὸν ἐν αὐτῷ ἧττον μὲν ἤ κατὰ τὸν νεὼν τοσοῦτόν τε ὄντα καὶ περικίονα, θαυμάσαι δὲ ἄξιον.* It was in this temple that Apollonius and his companion Damis are said to have awaited the permission of the king to enter the city. The words "in front of the wall" define the position of the Jandiāl temple accurately; for the travellers coming from the north, would naturally wait outside the north gate of the city. The description, too, of the inner sanctum as being "small compared with the size of the temple" is very significant; for this is a singular and specially noticeable feature of the Jandiāl Temple. The words *λίθου κογχυλιάτου* I take to mean, not "*of porphyry,*" as they are translated by Conybeare and other editors, but "*of stone covered with shell stucco,*" shell stucco having been used in India from time immemorial for covering the walls of buildings.

Stūpa and Monastery in Mound B.

At a distance of about 400 yards north of the temple just described were two low mounds, which I shall designate A and B, respectively. The latter, which lies to the east and is the larger of the two, is numbered 40 in Sir A. Cunningham's plan of the site. It proved to contain the remains of a medium-sized but very interesting *stūpa* set in the square courtyard of a monastery (Pl. XXXVI). The *stūpa* is of two periods, having originally been built in the Pahlava epoch, and rebuilt probably in the third century of our era. The earlier structure is now standing to a height of only 2′ 4″ above the old floor level. It is square in plan, with a projecting staircase on its southern face, and a relic chamber measuring 11′ by 14′ in the centre. Like the Pahlava shrines in Sirkap, it is faced with squared *kañjūr* blocks somewhat irregularly laid, the core and foundations consisting of rough limestone blocks and pebbles closely compacted with earth. Round the base runs a torus and scotia moulding of the usual Pahlava pattern, and above is a series of square pilasters, six on each side of the building, which were once surmounted by a dentil cornice. The whole of this *stūpa* plinth as well as a small railing of *kañjūr* stone, which crowned its edges and flanked the ascending stairway, was covered with a thick coat of stucco. Leading from the entrance of the monastery to the steps on the south side is a narrow causeway of stone, and near the foot of the steps on their eastern side is a square plinth, similar to those by the side of the Pahlava shrines in blocks F and G in Sirkap.

When this *stūpa* and the monastic quarters connected with it had fallen to decay, another *stūpa* and a second series of cells were erected on a different plan above their ruins. This later *stūpa* (Pl. XXXVIII *a*) has a circular plinth and is constructed of limestone blocks in the semi-ashlar, semi-diaper style, which came into vogue about the end of the 2nd century A.D. On this plinth and at a distance of 3′ 7″ from its outer edge are sections of the moulding which decorated the base of the drum. It is of decadent form, the edge of the torus being, as was usual in later buildings at Taxila, bevelled instead of curvilinear.

This *stūpa* was hastily and carelessly excavated by Sir Alex. Cunningham, who appears to have penetrated as far as the later circular structure only, which he describes as being 40′ in diameter, and which he erroneously identifies with the *stūpa* erected by Aśoka on the spot where Buddha had made an offering of his head. Prior to Sir A. Cunningham's excavation the relic chamber had been opened by the villager Nur, who, without being aware of the fact, seems to have thrown out the relics concealed within; for in the spoil earth which he had left at the side of the *stūpa* I found a small silver casket, $\frac{3}{4}$″ in diam. and lenticular in shape, containing a smaller one of the same pattern in gold, and, in the latter, a small fragment of bone. The larger vase of steatite, in which these caskets had no doubt reposed, had disappeared.

Besides these relics and various fragments of the railing and dentil cornice mentioned above, the following minor antiquities found in the débris round this *stūpa* are deserving of notice :—

(1) 12 copper coins of Soter Megas. *Obv.* Helmeted bust of king to r., holding spear ; *Rev.* King on horseback, holding *aṅkuśa*. The coins had been buried after the earlier *stūpa* had fallen to ruin, but apparently before the later *stūpa* was built.

(2) Oval seal of banded agate, $\frac{11}{16}$″ long, engraved with the figure of a man on one side.

(3) Bronze bell, $1\frac{1}{4}$″ across mouth.

(4) Cube of garnet, $\frac{1}{8}$″ on each face.

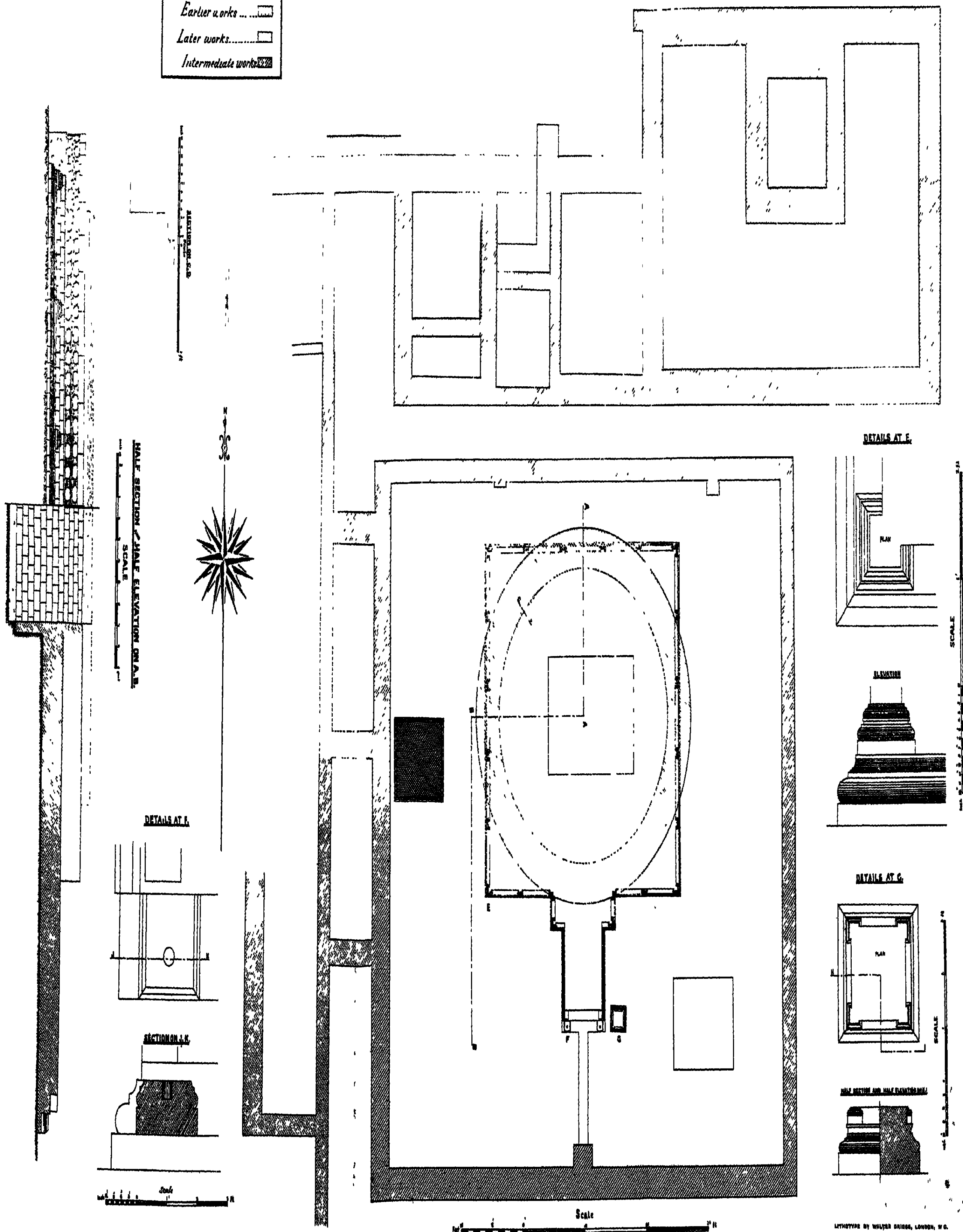
(5) Stucco head, 1′ $5\frac{1}{2}$″ high, wearing moustache and hair arranged in top-knot. Nose mutilated.

Stūpa A.

The second and smaller mound, which lies within a hundred feet of *stūpa* B, is also mentioned by Sir Alex. Cunningham as having been opened by the villagers and as containing a small ruined "temple." In reality it is a *stūpa* of almost precisely the same type as the earlier of the two just described, though the masonry and ornamental details are somewhat inferior. No relics were found in this *stūpa* nor did the débris yield any minor antiquities of interest.

Bir Mound.

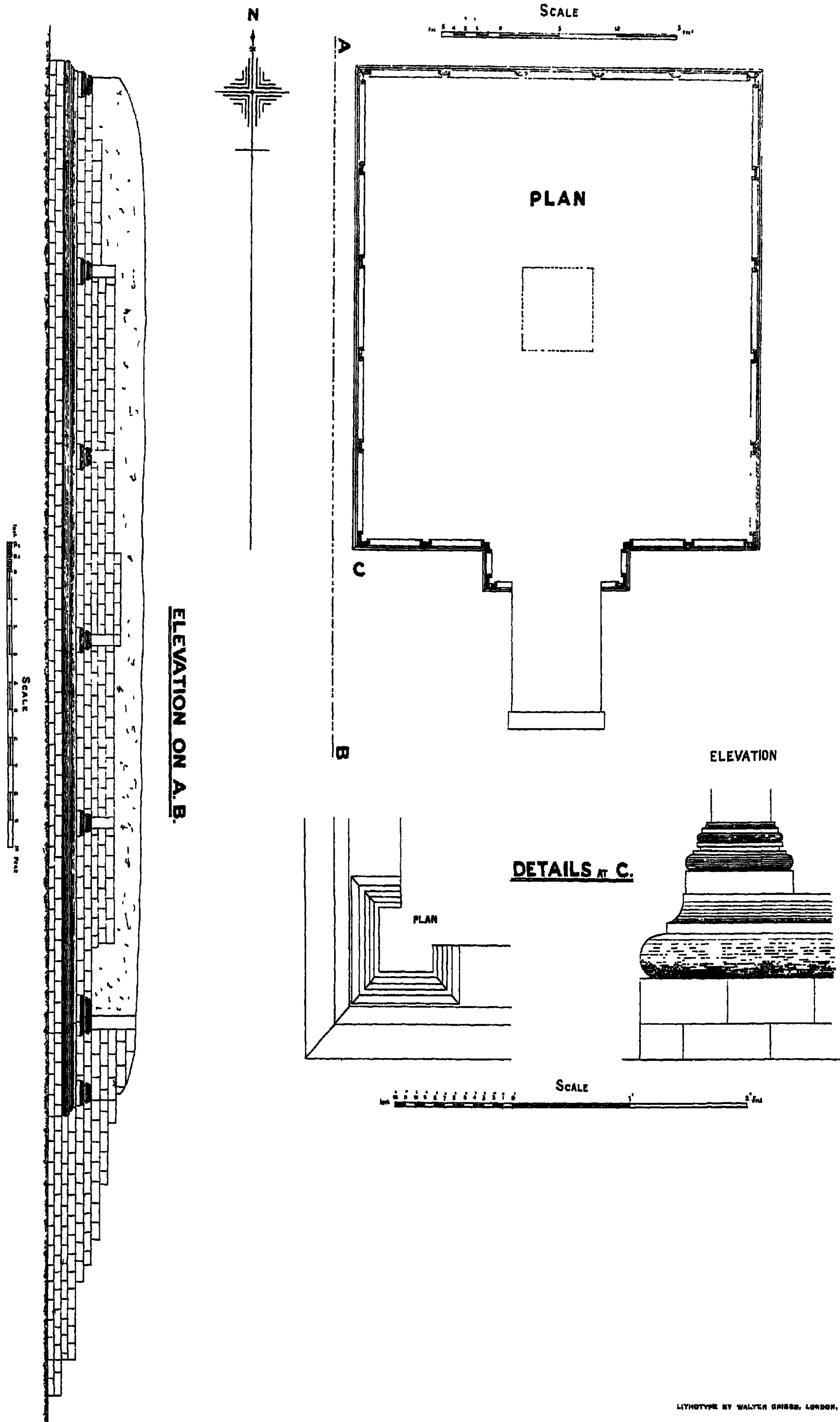
In concluding this account of my excavations, it remains for me to mention a few finds which I made on the Bir Mound, the earliest of the three city sites. Here my digging operations were very limited, being carried out mainly for the purpose of satisfying myself as to whether any remains existed in the compound of my bungalow, before I planted out a small garden there. I found that this part of the hill-top was covered with the remains of a building of rough rubble stone, of



LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

PLAN AND ELEVATION OF STUPA AND MONASTERY B, JANDIAL.

EXCAVATIONS AT TAXILA.



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PLAN AND ELEVATION OF STUPA A. JANDIAL.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.



a. JANDIAL: FRONT VIEW OF STUPA B.



b. JANDIAL: GENERAL VIEW OF STUPA A FROM W.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

which the remnants of a few chambers only could be traced. In one of these chambers, however, I found a small treasure in the shape of 160 punch-marked coins of debased silver, a very fine gold coin of Diodotus struck in the name of Antiochus II of Syria, a gold bangle and several other pieces of gold or silver jewellery, besides a large number of pearls, amethysts, garnets, corals and other stones. The gold pendant in the form of a tiger claw (Pl. XXXIX *d*, 2) and the little reliquary (Pl. XXXIX *d*, 1) by its side, are especially beautiful examples of the goldsmith's craft, the filigree design applied to their surface being remarkably delicate and refined. The coin of Antiochus Theus, as well as the local punch-marked coins, point to the latter half of the 3rd century B.C. as the time when this jewellery was hidden in the ground, and the gold claw and the reliquary, which are more worn than the other pieces, are probably half a century or so earlier. By the side of the jewellery I found what appears to be a goldsmith's crucible, with a few early Brāhmī characters stamped on its sides, and, in another chamber, a narrow well filled with earthenware jars (Pl. XXXIX *f*), all of which were turned upside down and empty. This well I excavated down to a depth of some 18′, and recovered about 50 vases. All these remains belong to the period of the Mauryan occupation, when the city of Taxila was undoubtedly situated on the Bir Mound. As these remains, however, are quite near the surface and as there is an artificial accumulation at least 15 or 20 feet deep below them, it look sas if we shall have little difficulty in getting back to remains of a considerably earlier date, and in throwing light on an age of which at present we have no monuments whatever in the Panjab. I append below a list of the chief antiquities discovered on this site.

1. Oblong reliquary of silver, $\frac{7}{8}''$ long, adorned on three sides with granulated designs consisting of lotus and geometrical patterns. Two holes on one side for suspension. Worn in parts. (Pl. XXXIX *d*, 1.)

2. Gold pendant, $1\frac{1}{8}''$ long, in shape of tiger's claw. The core is of lead, covered, except at the point, with beaten gold ornamented with granulations. The granulated pattern is hexagonal, each hexagon being centred with a rosette. The claw is pierced by three holes for suspension. (Pl. XXXIX *d*, 2.)

3. Gold object, $1\frac{5}{8}''$ long, hollow within and open at one end; adorned with wavy lines on each side and with two plaits near the rim at the open end. (Pl. XXXIX *d*, 3.)

4. Cube-shaped pendant of gold, 5″ across, pierced for suspension. The decoration is obliterated.

5. Three gold pendants, $\frac{9}{16}''$ long, in form of pipal leaves.

6. Vase-shaped bead of gold, $\frac{3}{8}''$ across.

7. 5 lozenge-shaped beads of gold, $\frac{7}{16}''$ across.

8. Pendant of ivory in form of *triratna*, $\frac{3}{4}''$ across.

9. Ditto, in form of two leaves (?) interwined, $\frac{3}{8}''$ across.

10. Square stone-seal, $\frac{7}{16}''$, with broken handle; trident and cross design.

11. Copper bangle, covered with thin gold leaf, $2\frac{5}{16}''$ across. Edges bent outwards. Broken into two pieces.

12. Spear-shaped pendant of green glass, $\frac{7}{8}''$ long.

13. Goldsmith's crucible (?) of terracotta, $3\frac{9}{16}'' \times 1\frac{15}{16}''$ across mouth; pierced with small hole at base. Early Brāhmī inscriptions in oblong incuse on either side.

14. Toy bull of terracotta, 5″ long. Two legs broken. Crude workmanship. (Pl. XXXIX *e*, 1.)

15. Lower half of terracotta figurine, seated in Western fashion, 2½″ high. Traces of anklets and garment. (Pl. XXXIX *e*, 2.)

16. Head of toy ram of terracotta, 1¾″. Red wash. (Pl. XXXIX *e*, 3.)

17. Toy elephant of terracotta, 5¾″ long, much mutilated. (Pl. XXXIX *e*, 4.)

18. Toy horse of terracotta, 4½″ long. Hind legs and tail broken. Traces of bell around neck. (Pl. XXXIX *e*, 5.)

19. Earthenware jar, 9″ high. Turned on wheel. No slip or paint. (Pl. XXXIX *f*, 1.)

20. Ditto, 12½″ high. Brush marks on surface No slip or paint. (Pl. XXXIX *f*, 2.)

21. Ditto, 8″ high. One side broken. No slip or paint. (Pl. XXXIX *f*, 3.)

22. Top of earthen jar, 5½″ high. Elongated neck, pierced with minute hole; upturned spout on one side, with small perforations below. Traces of red wash. (Pl. XXXIX *g*, 1.)

23. Earthen jug, 10″ high. Handle on one side. Mouth broken and body cracked. Cross-hatched design in broad band round shoulder. Design executed in black on red wash. (Pl. XXXIX *g*, 2.)

24. Earthen jar, 6½″ high. Mouth broken. Red wash. (Pl. XXXIX *g*, 3.)

Coins.

Punch-marked. One hundred and seventy-five punch-marked coins were found in a single deposit at the Bīr mound. The great majority of these are of copper with a slight admixture of silver, and most of them bear on the reverse the so-called Taxilan symbol. With the one exception described in the list, however, all belong to fairly common types. In the same hoard was a gold coin of Diodotus and some jewellery of a distinctively Mauryan character, which point to the latter half of the 3rd century B.C. as the date of their currency.

Local Taxilan. Among local Taxilan issues Nos. 2, 3, and 4 of the list below are specimens of uncommon types. Seven specimens of the first type were recovered, three of the second, and four of the third.

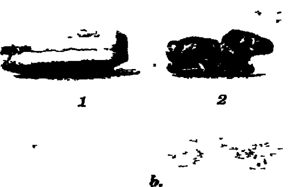
Indo-Greek. In the city of Sirkap, which has produced nearly all the Indo-Greek coins, the Greek stratum of buildings lies below the Kushān, Pahlava and Śaka strata, and has been penetrated in a few spots only. The collection of Indo-Greek coins is not, therefore, a large one. It comprises specimens of Demetrius, Agathocles, Eucratides, Heliocles, Lysias, Antialcidas, Apollodotus, Menander, Zoilus, Philoxenus, Hippostratus, Telephus and Hermæus. A few of these are very rare coins, particularly No. 6 (Apollodotus), of which there are no specimens in any of the Indian Museums, and No. 7 (Telephus), of which there are only two poor specimens in the Lahore Museum.

Bhadrayaśa. Rare, also, is the coin of Bhadrayaśa (No. 9), whose type resembles that of Zoilus and whose date may be assigned to the early half of the 1st century B.C.

Hermæus and Kadphises I. Coins of Hermæus, the last of the Greek kings of Kābul, or of Hermæus and Kadphises I, were found in large numbers in the latest (Kushān) stratum at Sirkap.



a.

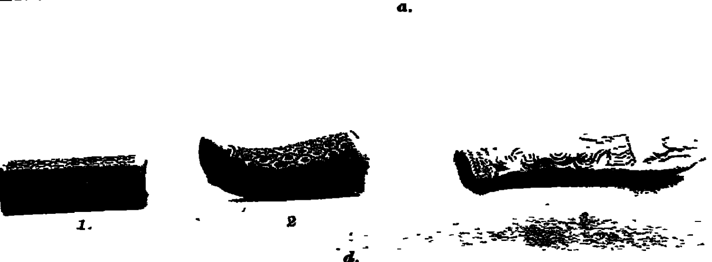


1 2

b.

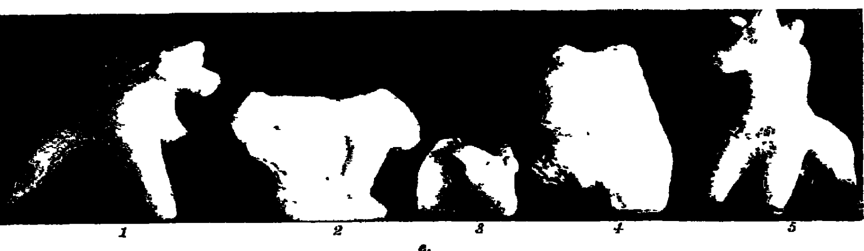


c.



1. 2 3

d.



1 2 3 4 5

e.



1 3.



1. 3.

a-g. MISCELLANEOUS.

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After the death of Gondopharnes and the subsequent break-up of his Indo-Parthian kingdom, it seems probable that Hermæus with the help of Kujūla Kadphises regained his lost kingdom of Kābul and then co-operated with his ally in the conquest of Gandhāra and Taxila.

Śakas and Pahlavas.

The great majority of the coins belong to the Śaka and Pahlava kings, particularly to Azes I and Azes II. Of Maues, the first of the Śaka rulers of Taxila, only 29 specimens have been recovered, but it is noteworthy that these comprise 10 out of a total of 19 varieties known to us. This paucity of coins is striking in the case of so important a ruler as Maues, but it may plausibly be explained on the assumption that Maues rose to power in Arachosia and did not extend his sway over Taxila until late in his reign. Of Azes I and Azes II, on the other hand, the coins are very numerous, but the types are relatively few, there being no more than eleven in the case of the former and six in the case of the latter. Among those of Azes I, Nos. 21 and 22 of the list are especially rare, there being no other specimen of the former in India and none of the latter in the British Museum or Indian Museum at Calcutta. The existence of Azes II, which was first postulated by Mr. Vincent Smith, has not hitherto been accepted by other numismatists and historians, but Mr. Smith's view now finds corroboration in the fact that the coins of Azes II were discovered, generally, in a higher stratum than those of Azes I, and in the fact also that Aśpavarma appears as *stratēgos* or *satrap* of Gondopharnes as well as of Azes, who manifestly cannot be identified with the first Azes, who was reigning in the middle of the 1st century B.C.

Of Azilises, who intervened between Azes I and Azes II, coins are very few. Possibly his reign was a short one, or he may have been represented at Taxila by some local colleague, perhaps by Rājūvula or Idharasa.

Idharasa.

Of the last-named chief six copper coins were found in different parts of Sirkap, three of which were associated with issues of Gondopharnes. In point of style, however, the coins of Idharasa are allied as closely with the coins of Azilises and Azes II as they are with those of Gondopharnes. In no specimen is the Greek legend on the obverse legible, but in the Kharoshṭhī legend on the reverse, Idharasa styles himself *maharaja* and apparently *apratihata,* from which it may be concluded that he occupied, at any rate, a quasi-independent position.

Rājūvula.

Of Rājūvula, or Rañjubula, 28 coins of lead were recovered on the same site. This ruler has hitherto been regarded as a satrap of Mathurā, approximately contemporary with the emperor Maues. The presence, however, of these lead coins at Taxila points to his having held a satrapy there as well as at Mathurā, and the find-spots of these coins coupled with their style appear to indicate that he was ruling about the beginning of the Christian era. The coins include two varieties, namely, 14 of the types published by Mr. Whitehead in his Punjab Museum Catalogue[1] and 14 of a smaller size. In every case the Greek legend on the obverse defies decipherment.

Sasan.

Most important of all the numismatic finds is the group of 21 small silver coins from block E, which were contained in an earthen jar along with the several gold and other objects described on pp. 27-8 above. It will be seen from the list (Nos. 27-47)

[1] P. 166, No. 188.

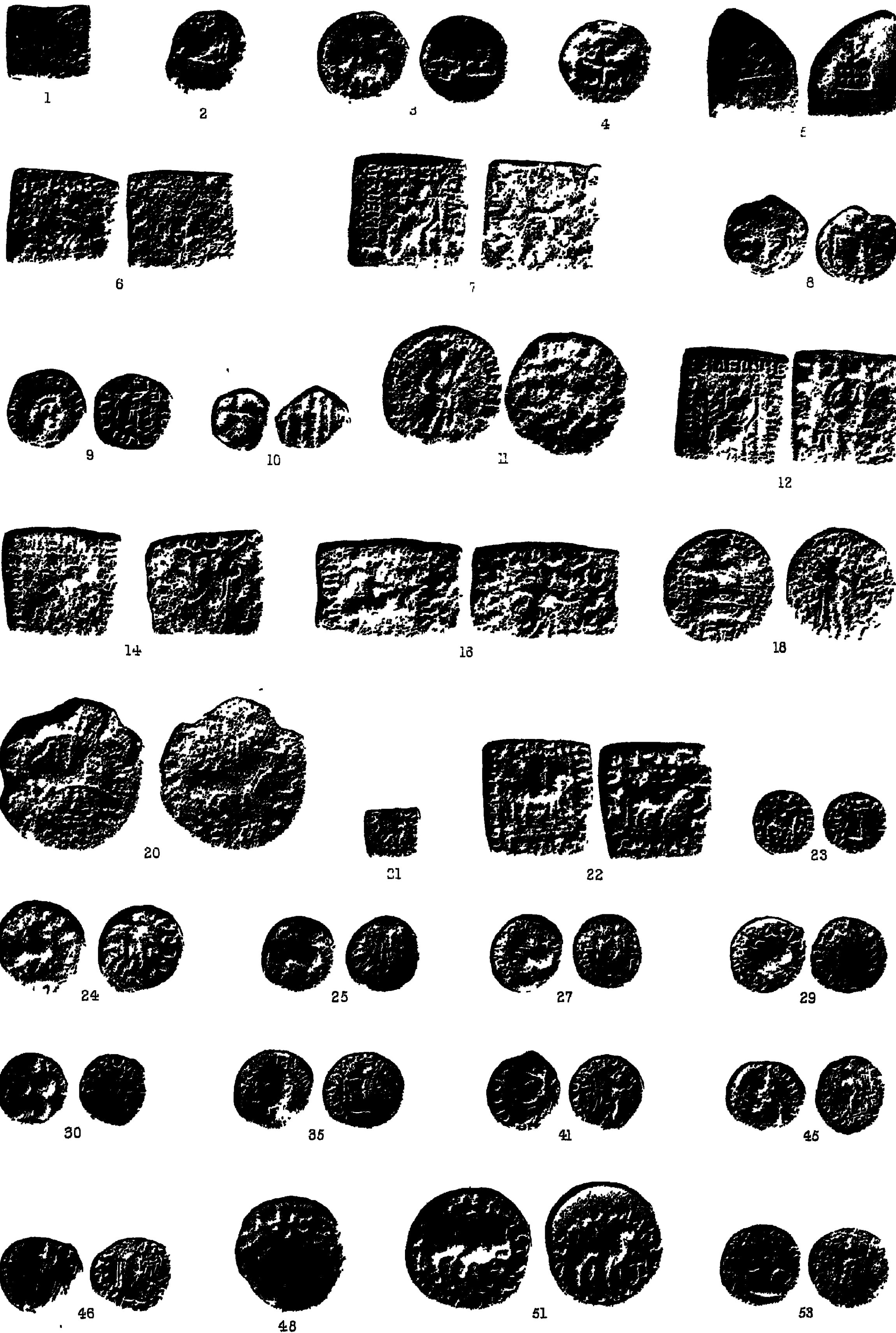
that all these are new types. Eight of them (Nos. 27-34) bear on their reverse the legend: *Maharajasa Aspabhataputrasa Sasasa.* "Of the great king, the Saviour, Sasan, nephew of Aspa." Coins of Gondopharnes with the word *Sasasa* on the reverse have long been known to us, but it has been a matter of dispute whether *Sasasa* was the name of a subordinate ruler or some unexplained epithet of Gondopharnes himself. It is now clear that it is the name of a ruler, Sasan, and that like his uncle Aspa, whom I identify with Aśpavarma, he was first a *stratēgos* of Gondopharnes, and subsequently assumed independent or quasi-independent power.

Sapedanes and Satavastra.

Of the remaining coins five belong to Sapedanes, five to Satavastra, and three to a Kushān king. The Kharoshṭhī legends on the coins of Sapedanes read: *Maharajasa rajarajasa tratarasa dhramiasa Sapedanasa;* those on the coins of Satavastra: *Maharajasa rajarajasa tratarasa Satavastrasa.* Both these kings were previously unknown to us. That they came after Gondopharnes, is clear from the style of the coins; but over what kingdom they ruled, is uncertain. No other coins belonging to them have been found at Taxila, and it is unlikely, therefore, that either of them reigned at Taxila. Probably they were contemporaries of Kujūla or Wima Kadphises and ruled over small states further west, acknowledging the supremacy of the Kushān overlord, who had established his capital at Taxila. This supposition is borne out by the three coins Nos. 45, 46 and 47, which supply an important link between the Pahlava and the Kushān issues. These coins are also of silver and similar to the issues of Sasan, Sapedanes and Satavastra described above, but they bear on the obverse the head of a Kushān king resembling that of Wima Kadphises. On the reverse are a winged Victory and the legend *Maharajasa rajatirajasa Kushanasa yavugasa* (?) The epithet *yavuga* (=Turkish *jabgou*) is found on coins of Kujūla Kadphises, and is supposed to have been replaced by the title *maharaja rajatiraja* after the conquest of India. The simultaneous use, however, of the two terms in one and the same legend appears to indicate that the prevalent view regarding the meaning and use of this title is not wholly correct. Of the more readily identified coins of Kadphises I the collection includes several rare specimens. In the case of two of these (Nos. 47 and 48) the letters on the reverse, although clear, are not decipherable. They are, therefore, reproduced in facsimile. Of the very rare "seated Buddha and Zeus" type there are six specimens, which collectively yield the legend on the reverse *yavugasa Kuyula Kasasa Khushanasa,* thus putting their identification beyond dispute.

With Wima Kadphises the coins of Sirkap come to an end. For the city of Sirkap, which had been built by the Greeks and had remained in continuous occupation during the Śaka, Pahlava and early Kushān periods, was then, apparently, transferred to the site of Sirsukh. No coins of Soter Megas or of Kanishka, Huvishka or Vāsudēva have been found in Sirkap, but a number of coins of the first-named king were found at Jandiāl and the Dharmarājikā *stūpa* in strata which indicate that he was reigning about the close of the 1st century A.D., though they do not add anything further to our knowledge of this shadowy king. Coins of Kanishka, Huvishka and Vāsudēva, also, have been found by the peasants in large numbers in the city of Sirsukh, and at the Dharmarājikā *stūpa* they have been discovered by me both separately and together in the relic chambers of small *stūpas* which cannot be

EXCAVATIONS AT TAXILA



Photogravure

Survey of India Offices, Calcutta, 1916

COINS

assigned to an earlier date than the beginning of the 2nd century A.D. Thus, there is now clear and incontrovertible evidence that these three kings, Kanishka, Huvishka and Vāsudēva, were later than the two Kadphises.

LIST OF SOME RARE OR UNIQUE COINS.

No.	Metal and size.	Obverse.	Reverse.	Find-spot.	Remarks.
			Punch-marked.		
			Square		
1	Billon ·62	Three-arched *chaitya* surmounted by crescent, arrow-headed wheel, tree in railing and two-humped bull	Blank	Bir Mound	Not represented in the Indian collections.
			Local Taxilan.		
			Circular.		
2	Æ ·65	Recumbent bull, l., *triratna* above; *svastika* below.	Blank . . .	Sirkap; near shrine I.	Not represented in the Indian collection.
3	Æ ·7	Elephant walking to l., three-arched *chaitya* surmounted by crescent, and cross above.	Square cross and three-arched *chaitya* surmounted by crescent.	Sirkap; 48 x 64′; 8′ 6″ deep.	Ditto.
4	Ditto.	*Svastika* with a 'taurine' symbol in each arm.	Blank	Sirkap; 56 x 63′; 4′ deep.	Ditto.
			Agathocles.		
5	Æ 1·x·8.	Six-arched *chaitya*. Kh. legend: *Akathukreyasa.*	Tree in railing. Kh. legend: *hitaja* [*same*].	Sirkap; 3′ deep.	Quarter circle in shape. Cf. *P. M. Cat.*, Pl. II, 52.
			Apollodotus.		
6	Æ ·8	Apollo seated to r. on throne. Gk. legend: ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΑΠΟΛΛΟΔΟΤΟΥ	Tripod-lebes in beaded square. Mon. in right field. Traces of Kh. legend.	Sirkap; 104 x 61′; 3′ 8″ deep.	Not represented in the I. M. and P. M. cabinets. Cf. Cunningham, Pl. IX, 12.

No.	Metal and size.	Obverse.	Reverse.	Find-spot.	REMARKS.
			Telephus.		
7	Æ ·9	Zeus on throne to l.; r. hand advanced; long spear in l. hand; Gk. legend: ΒΑΣΙΛΕΩΣ ΕΥΕΡΓΕΤΟΥ ΤΗΛΕΦΟΥ	Draped male figure walking to r. with r. hand outstretched and holding a long spear on l. shoulder. Mon. in r. field. Kh. legend: *Maharajasa kalanakramasa (Te)li (phasa)*.	Sirkap; 67 x 62′; 8′ 4″ deep.	In good preservation. Cf. *P. M. Cat.*, Pl. VIII, 640.
			Hermæus.		
8	Æ ·62	Bust of king diademed to l. Marginal legend completely obliterated.	Winged Nike to l., holding wreath in extended r. hand and palm in l. Mon. in r. field. Kh. legend almost wholly gone.	Sirkap; 99 x 64′; 8′ deep.	Badly worn. Cf. *I. M. Cat.*, p. 33, type 2.
			Bhadrayaśa.		
9	Billon ·6	Bust of king diademed to r. Gk. legend: ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ	Pallas standing r. with aegis in l. hand and hurling thunderbolt with r. Kh. monogram *dhu* in r. field, *dra* in l. Kh. legend *Ma. . . . .tarasa Bhadrayaśasa.*	Sirkap; 67 x 66′ 5′ 6″	Copied from Strato's currency. Cf. E. J. Rapson, *Corolla Numismatica*, and *P. M. Cat.*, Pl. IX, ix.
			Uncertain.		
*10	Æ ·5 square.	Crude figure with arms outstretched.	Four thick parallel lines .	Dharmarājikā stūpa, O²; 8′ deep.	Cf. *P. M. Cat.*, Pl. VIII, 627; *B. M. Cat.*, Pl. XIV, 7.
			Maues.		
11	Æ ·9	Herakles facing with r. hand on hip and l. holding club and lion's skin. Gk. legend. ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛΟΥ ΜΑΥΟΥ	Maneless lion to l. Mon. in l. field. Kh. legend:. . .*Rajasa Mahatasa Moasa.*	Sirkap; 54 x 65′; 9′ deep.	Cf. *B. M. Cat.*, Pl. XVI, 5.
12	Æ ·9	Zeus enthroned to l.; sceptre in l. hand; r. hand extended towards a small (?) winged figure. Gk. legend as above.	City goddess facing wearing turreted crown and holding sceptre in l. hand and veil in r. Mon. in l. field. Kh. legend as above.	Dharmarājikā stūpa, D⁹; 5′ deep.	Cf. *P. M. Cat.*, Pl. X, 15 and *B. M. Cat.*, Pl. XVI, 9.

* Six coins of this type came from the Dharmarājikā stūpa.

No.	Metal and size.	Obverse.	Reverse.	Find-spot.	Remarks.
			Maues—*contd.*		
13	Æ ·87	Zeus standing l. with r. hand advanced and long sceptre in l. Gk. legend as above.	Male deity facing, wearing pointed cap, with r. hand on hip. Mon. as above in l. field. Kh. legend: *Rajatirajasa Mahatasa Moasa.*	Sirkap; 89 × 66′; 11′ deep.	Cf. *P. M. Cat*, Pl. X, 16.
14	Æ ·9	Poseidon standing to front; r. foot placed on shoulder of river god; r. hand hurls thunderbolt at a small figure to r.; trident in l.; Gk. legend as above.	Bacchante (?) standing to front among vines, holding their boughs Mon. indistinct. Kh. legend defaced.	Sirkap; 94 × 59′; 9′ deep.	Cf. *P. M. Cat.*, p. 101, 23.
15	Æ ·9	Poseidon standing to front with r. leg planted on river god (?); l. hand holds aplustre, to which is clinging a small figure, on whom he hurls thunderbolt with his r. hand. Gk. legend as above.	Design and Kh. legend as above. Mon. [monogram] in l. field.	Sirkap; 98 × 70′; 9′ deep.	Cf. *B. M. Cat.*, Pl. XVII, 2.
16	Æ 1·1	King on horse-back to r.; whip over shoulder; r. hand advanced. Gk. legend as above.	Pallas striding r. with flowing garment; r. hand advanced; in l., traces of spear and shield. Kh. legend as above. In upper r. field Kh. *dami*	Sirkap; 83 × 63′; 4′ deep.	Cf. *B. M. Cat.*, Pl. XVI, 6.
			Azes I.		
17	Æ ·65	King facing, seated cross-legged on cushion; in r. hand traces of *ankuśa*; in l., sword resting on his knees. Gk. legend and Kh. monogram defaced.	Hermes standing to l.; Kh. legend and monogram defaced.	Sirkap; 117 × 63′; 2′ 6″ deep.	Remarkable for its small size. Cf. *B. M. Cat.*, Pl. XIX, 1; *P. M. Cat.*, p. 120, No. 207.
18	Æ ·9	King seated as above, facing to l. with r. arm extended; sword in l. hand placed across the knees. In l. field, Kh. *li*. Gk. legend: ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ and in exergue, ΜΕΓΑΛΟΥ	Hermes standing to l. with r. arm extended; l. hand at hip; Kh. *sa.* and *va* in r. field. Same mon. as in No. 15 Kh. legend: . . . *rajasa rajatirajasa.*	Sirkap; spoil earth.	The king's name is omitted.

No.	Metal and size.	Obverse.	Reverse.	Find-spot.	Remarks.
			Azes I—*contd.*		
19	Æ ·7	Elephant to r.; above, traces of Kh. *a*. Gk. legend: . . . . ΑΖΟΥ . . . . of which the letter Υ is inverted.	Humped bull to r.; above, mon. ; Kh. legend: . . . . *rajasa Mahatasa Ayasa.*	Sirkap; 192 × 67′; 2′ 6″ deep.	Rare on account of its small size. Cf. *B. M. Cat.*, Pl. XIX, 7. *P. M. Cat.*, Pl. XII, 288, and *I. M. Cat.*, p. 45, type 6.
20	Æ 1·15	King on horse-back to r. Gk. legend and monogram obliterated.	Humped bull to r. Kh. legend: *Maharajasa* . . . . *Mahatasa Ayasa.*	Sirkap; 53 × 65′; 10′ deep.	Circular in shape. There is no circular coin of this type in either the Indian Museum or the British Museum.
21	Æ ·4	Traces of elephant to r.; Gk. legend: ΒΑΣΙΛΕΩΣ	Lion to r.; above , Kh. legend *Maharajasa* . . . . *Mahatasa Ayasa.*	Sirkap; 94 × 57′; 7′ deep.	Tiny square coin. There is no specimen of this type in any collection except the Bodleian. Cf. *P. M. Cat.*, p. 131, unrepresented type ii.
			Azilises.		
22	Æ ·9	King on horse-back to r., holding whip and couched lance. Indistinct Kh. monogram (*Ja?*) in r. field. Gk. legend: ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛΟΥ ΑΖΙΛΙΣΟΥ	Bull standing r. Kh. legend: *Maharajasa rajarajasa mahatasa Ayilishasa.* Above, Kh. *sa* and	Sirkap; 107 × 68′; 6′4″ deep.	In good preservation. Cf. *P. M. Cat.*, p. 139, No. 360.

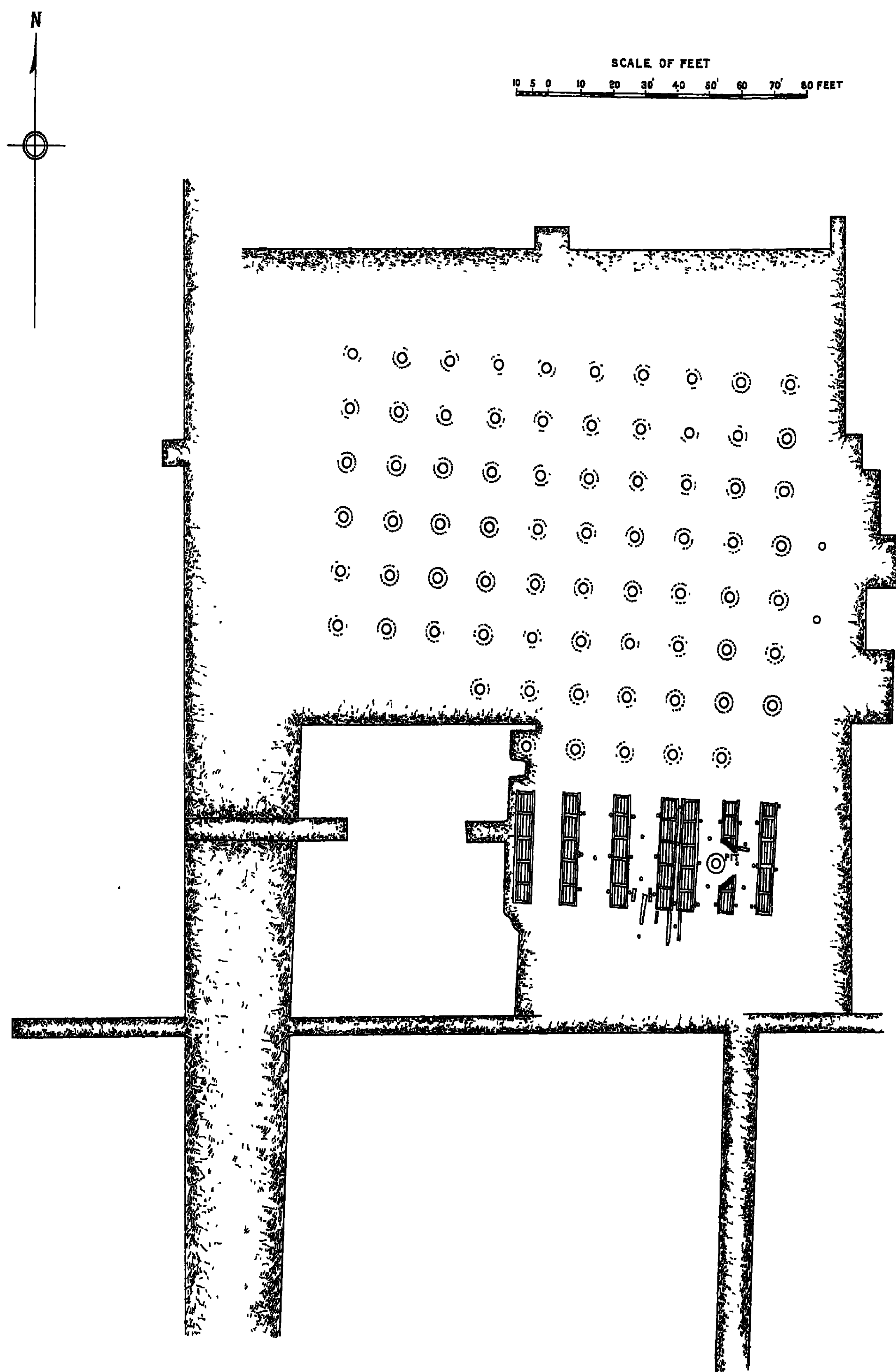
No.	Metal and size.	Obverse	Reverse	Find-spot.	REMARKS.
			Idharasa		
23	Æ ·48	King on horse-back to r. In front Kh. *ya.* Marginal legend defaced.	Pallas standing r. In front Kh mon. *pri.* Kh. legend: .... .*rasa Idharasasa apa.*	Sirkap; 3′ below the surface.	The letter *dha* in the Kh. legend on the reverse is inverted. Six coins of this unique type have been found at Taxila, of which three were associated with coins of Gondopharnes.
			Rājūvula.		
24	Copper with lead coating. ·7	Maneless lion standing r. Above, indistinct monogram. Marginal Gk. legend defaced.	Herakles (?) facing with right arm advanced Kh. *śa* in r. field and *ḍa* in left. Kh. legend: ..*sa Rajalasa aprati*	Sirkap .	Very rare. Cf. *P. M. Cat.*, p. 166, No. 133.
25	Lead ·6	Ditto . . .	Ditto. Kh. legend: ... *trapasa Rajalasa apra*	Sirkap; 90×56′ 2′ 4″deep	
26	Lead ·55	Ditto . . .	Ditto. Kh. legend ... *Rajalasa*	Sirkap; Spoil earth.	Thinner than the preceding two specimens.
			Sasan.		
27	AR ·6	Bust of bearded king to l., diademed. In l. field ☿ Marginal Gk. legend: .. N (?) ...CIΛ ...	Nike standing l. with wreath in extended r. hand and palm branch (?) in l. Kh. *bhu* in r. field. Kh. legend ... *spabhataputrasa trata*	Sirkap; Building E; 4′ deep.	Cf. for type of bust, *B. M. Cat.*, Pl. XXIII, 8 and 9.
28	AR ·6	Ditto. Gk. legend ... N (?) CM ...	Ditto. Kh. legend ... *sa aspabhata* ...	Ditto .	The bust is slightly different.
29	AR ·6	Traces of bust of king to l. Gk. legend: ..BACIΛ...	Traces of Nike as above superimposed on the bust of a king with prominent chin facing r. Kh. legend ... *rajasa Aspabha* ... *trasa tratarasa Sasasa.*	Ditto. .	This type was evidently restruck on an older issue.

No.	Metal and size.	Obverse.	Reverse.	Find-spot.	Remarks.
			Sasan—*contd.*		
30	Æ. ·55	Traces of bust of king to l. but different bust. Traces of Gk. legend: .. CIΛE ..	Traces of Nike as above superimposed on the bust of a king with prominent chin facing r. Kh. legend: *Maharajasa Aspa . . . . susasa.*	Sirkap; Building E; 4' deep.	
31	Æ. ·55	Bust of king to l. wearing torquis. Traces of Gk. legend: . . . IΛ . .	Ditto. Kh. legend: *spabhataputrasa tratarasa sa . .*	Ditto.	
32	Æ. ·6	Ditto. Traces of Gk. legend:	Ditto. Kh. legend: *trasa tratarasa Sa . . .*	Ditto .	Type of bust as in 27.
33	Æ. ·6	Ditto, but different bust Gk. legend: . . . . ACIΛ	Ditto. Kh. legend: . *harajasa Aspabha . . . . . tarasa Sasasa.*	Ditto .	Seems to have been restruck over an older issue.
34	Æ. ·6	Bust of king defaced .	Traces of Nike. Kh. legend *mahara . . . . . taputrasa tratara . . sasa.*	Ditto.	
			Sapedanes.		
35	Æ. ·62	Bust of king to l. with diadem and beard. Same mon. as above in l. field. Gk. legend: . . . HAΩN BACIΛH	Nike standing l. holding wreath and palm branch. [monogram] in r. field. Kh. legend *rajarajasa tratarasa dhramiasa.* In exergue, · *pedanasa.*	Ditto.	
36	Æ. ·62	Ditto. Gk. legend: . . CAPHNΔBA . . .	Nike standing l. holding wreath and palm branch [monogram] in r. field. Traces of Kh. *bhu* in r. field. Kh. legend: . . *jasa rajaraja. dhramiasa.* In exergue, *Sapeda . .*	Ditto.	
37	Æ. ·5	Traces of bust. Gk. legend obliterated.	Nike standing l. holding wreath and palm branch [monogram] in r. field. Kh. *bhu* in r. field. Kh. legend: *dhramiasa* In exergue, *Sapedanasa.*	Ditto.	Much defaced.
38	Æ. ·6	Bust of king to l. Same mon. in r. field. Gk. legend: BACIΛ . . .	Ditto, Kh. legend . . . *sa tratarasa dhramiasa.*	Ditto.	

No.	Metal and size.	Obverse.	Reverse	Find-spot	REMARKS
			Sapedanes—*contd.*		
39	AR ·6	Bust of king to l. Same mon. in r. field. Gk. legend obliterated.	Nike standing r. holding wreath and palm branch. Kh. *bhu* in l. field. Kh. legend . . . . . *mia* . . *peda* . .	Sirkap; Building E., 4′ deep	Much defaced.
			Satavastra.		
40	AR ·65	Bust of king to l. with short beard. Same mon. as above in l. field. Gk. legend . . ϢCCAYOΛ . .	Nike standing r. holding wreath and palm branch. Traces of Kh. *bhu* in l. field. Kh. legend: . . *rasa Satavastrasa maharajasa*	Ditto.	
41	AR ·6	Ditto. Gk. legend: . . . CIΛCIΛ . . .	Ditto. Kh. legend: *Satavastrasa mahara* . .	Ditto.	
42	AR ·6	Ditto. Gk. legend defaced.	Ditto. Kh. legend . . . . *maharajasa*	Ditto.	
43	AR ·63	Mon. partly damaged Gk. legend obliterated.	Ditto. Kh. legend: *maharajasa* . . . . *sa*	Ditto.	The bust and Nike are in excellent preservation.
44	AR ·63	Bust of king to l. with short beard. Mon. intact. Gk. legend . . HϢC . . .	Ditto. Kh. legend . . . *rasa* . . . *jasa*.	Ditto.	
			Kushān.		
			(? *Kadphises II.*)		
45	AR ·6	Bust of king to l. with conical head-dress. Gk. legend . . AΓNOHT . . .	Nike standing l. holding wreath and palm branch. Kh. *bhu* in r. field. Kh. legend . . . *sa maharajasa ja* . . . . *sa*.	Ditto	The bust resembles that of Kadphises II.
46	AR ·6	Ditto. Gk. legend: NΩΔ . . BAΩC . .	Ditto. Kh. legend . . . . *sa rajatirajasa Khushaṇasa ya* (*vugasa*).	Ditto.	
47	AR ·6	Ditto. Gk. legend: . . Δ . , BA.	Nike standing r. holding wreath and palm. Traces of Kh. *bhu* in l. field. Kh. legend . . . *rajasa raja* . . .	Ditto.	

No.	Metal and size.	Obverse.	Reverse.	Find-spot.	Remarks.
			Kadphises I.		
48	Æ ·9	Bust of Hermæus r. Corrupt Gk. legend OCΛONVIO	Herakles standing facing with club in r. hand and lion's skin in l. Kh. legend	Sirkap; 99 × 59′;	Cf. *I. M. Cat.*, Pl. XI, 1.
49	Æ ·85	Ditto. Corrupt Gk. legend: VΛOVN	Ditto Kh. legend:	Sirkap; 115 × 63 3′6″ deep.	In very good preservation.
50	Æ ·9	Ditto. Legend in very corrupt Greek.	Ditto Kh. legend: *yavugasa dhramaṭhidasa Kajula . . saka.*	Sirkap; 80 × 64′; 5′ 10″ deep.	
51	Æ ·9	Humped bull standing r. Kh. *su* in r. field. Above, symbol . Corrupt Gk. legend.	Two humped Bactrian camel standing r. Mon. in r field. Kh. legend . . . *sa kuyulakarakaphasa dhra* (?).	Sirkap; 103 × 69′ 5′ deep.	In good preservation.
52	Æ 6	Buddha seated cross-legged with r. hand uplifted. Kh. legend . . . *gasa kuyula* . .	Zeus standing r. with right hand advanced. Marginal legend indistinct.	Sirkap; 78 × 59′; 2′ 9″ deep.	Cf. *P. M. Cat.*, Pl. XVII, 29.
53	Æ ·6	Ditto. Kh. legend . . . *sa Khushaṇa.*	Ditto. Kh. *va* (?) in r. field. Marginal legend obliterated.	Sirkap; 93 × 67′; 7′ 7″ deep.	
54	Æ ·6	Ditto. Kh. legend . *kasasa.*	Ditto. Badly mutilated.	Sirkap; 4′ deep.	

JOHN MARSHALL.



LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

KUMRAHAR SITE: PLAN OF THE MAURYAN LEVEL.

MR. RATAN TATA'S EXCAVATIONS AT PĀṬALIPUTRA.

THE great event of the year, in the Eastern Circle of the Archæological Department, was the announcement of the offer made by Mr. Ratan Tata of Bombay to assist the Government in its work of Archæological exploration. To this end Mr. Tata proposed to undertake, through the agency of a member of the department, the thorough exploration of one of the more extensive and important buried sites of India, and announced his willingness to devote a sum of Rs. 20,000 a year, for an unspecified number of years, to this purpose. The site selected by Mr. Tata, in consultation with the Government of India and the Director General of Archæology, was the ancient Mauryan capital, Pāṭaliputra, and to my intense satisfaction, the work was entrusted to me.

Pāṭaliputra, it need hardly be remarked, has long been looked upon as one of the most promising fields in this country for excavation, but the great extent of the site, and the depth at which the more important remains lie buried, had hitherto made the adequate exploration of the place seem beyond the means of the Department itself. But when it became known that Mr. Tata's princely liberality was to remove this difficulty, the problem was taken up in earnest, and the results of such tentative exploration as had proved possible in the past were studied afresh with a view to determining the starting point for the new operations. Sir John Marshall, to whom the site was thoroughly familiar, generously arranged to pay a visit to Patna early in December and go over the ground with me, in order to guide me on the spot as to where and how the work should be taken in hand. Happily it proved that we had both independently come to the same conclusions as regards choice of sites, so that the chief point for consideration was the conduct of the work, and the amount which it would be wise to spend the first season. Sir John Marshall was of opinion that both the Kumrahar site, previously dug in small part by Colonel Waddell, and the Bulandī Bāgh, a little north-west of the former, could be undertaken profitably, and the season's programme was accordingly drawn up on this basis.

Our reasons for selecting these two points were as follows. In 1895 Colonel Waddell, to whom is due the credit of having determined the exact site of Aśoka's classic capital, and of having demonstrated that it had not been washed away *in toto*

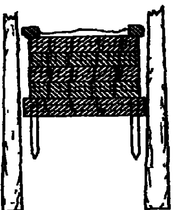
by the Ganges, made, or caused to be made, a number of trial diggings extending over a considerable area in modern Patna. In his subsequent report he brought together the more important of the literary references to the site, and essayed a contribution to the topography of the ancient city. Of his tangible finds, perhaps the most satisfactory individual piece was the fine stone capital, of seemingly Mauryan date, which now reposes in the garden of the Commissioner of Patna at Bankipore, and which was found, according to Colonel Waddell's Report, on the eastern edge of the Bulandī Bāg͟h. Colonel Waddell himself, for reasons which he has detailed, was inclined to the opinion that this site contained the famous monastery of the Buddha's Footprint. This identification is perhaps hardly calculated to meet with any very wide acceptance, but nevertheless, the beautiful capital recovered here was sufficient reason for believing that the site did indeed contain some massive and important building, whose recovery was likely to yield a wealth of decorative or other sculptures, and whose definite identification might be expected to shed real light on the vexed problem of the topography of the Mauryan capital. Thus the desirability of exploring the Bulandī Bāg͟h further was rendered obvious.

It will be as well, though, if I record, even at this point, that the season's operations at the site have led to no definite results. For reasons to be mentioned later, the work could not be begun here until late in the season, and this fact, coupled with that of the great extent of the area to be covered (our main trench was nearly 900 feet long) prevented our reaching any satisfactory depth. The Mauryan level was reached in only two places where trial pits were sunk, and in one of these ancient wood was found. Brick walls were met with higher in the soil over most of the area examined, and numerous minor remains were found, but none of these were of very special interest. The dearth of polished stone fragments was in the nature of a surprise, and the presence of large undressed stones, which Professor Jackson of the Patna College tells me must have come from Rājgīr, is an equally puzzling point. But the work which I was able to carry out here this year was too slight, and the results obtained were too inconclusive, to permit of any formal report at this stage. Colonel Waddell appears to have had very remarkable luck indeed in meeting with his beautiful stone capital so early in the trial stages of the work. It is to be hoped that similar good fortune will attend the prosecution of my own excavations next season.

As for the second of the two points selected, namely Kumrahar, the necessity for further exploratory work was beyond question from the beginning. Kumrahar itself is a modern village south of the present city of Patna, close to the main road which follows the railroad on the south; but the name is popularly given to a fairly wide stretch of country just to the south of this road, extending to a considerable distance to the west of the actual village. Much of this land is well raised above the general level, and all available evidences point to its having been in former times the site of extended and important occupation. Now at one point near the actual village of Kumrahar, and to the west of it, an old tank cuts into this high ground on the southern edge of the main road. This is called the Kālu tank. Some hundred yards to the south of this is another tank, the Chaman *tālāo*. Both



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LITHOTYPE BY WALTER GRIGGS, LONDON W C

KUMRAHAR SITE: PLAN OF THE SEVEN WOODEN PLATFORMS.

of these tanks have ill-defined edges, and both are shallow, being consequently dry in the cold season. They suffice, however, to mark off the particular tract of high land which lies between them. This tract is a rough square, measuring something like 250 or 300 feet a side. A cluster of huts bounds this area on the south-east, and an orchard on the west, while at a fairly central point in the tract itself, there stands a modern Muhammadan tomb, built of brick, which is nameless and contains no visible grave; and which, furthermore, is in a dangerously ruined condition. The building has no architectural pretensions. This tomb, then, together with the jungle which has collected around it, forms an apparent but unreal division of the single tract into two plots of land, which may most conveniently be differentiated in this paper as the northern half of the site, extending from the tomb to the Kālu tank, and the southern half, extending from behind the tomb south to the Chaman *tālāo*. When Colonel Waddell was in Patna, his attention was drawn to this tract of land, and he had a certain number of pits dug here and there in the northern half of the site. As a result certain fragments of polished sandstone were recovered which he recognized to be of Aśokan manufacture, and which he proposed to identify as fragments of a particular Aśoka column for which there is literary evidence. The Chinese pilgrim, Hiuen Thsang, speaks of two definite edict pillars set up by Aśoka at Pāṭaliputra: one the Jambūdvīpa column, which lay to the south, and one the so-called Nili column, which Aśoka is said to have erected in the midst of his palace enclosure and inscribed with a history of the palace city. As Colonel Waddell had thought to locate the position of the Jambūdvīpa column far to the south of this Kumrahar site, he not unnaturally concluded that the pillar fragments he met with at Kumrahar must be portions of this more northerly Nili column. This assumption on the face of it was not unreasonable, and in deciding to re-open the exploration of the Kumrahar site, I, for my part, was not without hopes that Colonel Waddell's theory might prove to be correct, in which case we should find in the Nili column not only an historical monument of enormous intrinsic value, but, more important still, a definite clue at last to the palace of Aśoka, which is obviously the main goal of the excavator at Pāṭaliputra. In any case it was already established that some Mauryan monument had certainly stood here, which could hardly fail to be of importance even if it did not turn out to be actually the Nili column. Thus the further excavation of the Kumrahar site appeared desirable, even irrespective of the soundness of Colonel Waddell's deductions.

After arrangements with the owners of the land had been made for me through the courtesy of Mr. Weston, the Collector of Patna, the work was begun, with the permission of the Government of Bihar and Orissa, on the 6th January 1913. But, as at first the expense was to be met out of my own office budget, pending the completion of the negotiations between Mr. Ratan Tata and the Government of India, it was not practicable to begin straight away at both the sites proposed by Sir John Marshall, and we accordingly commenced operations at Kumrahar only. From this time until the arrangements with Mr. Tata were completed, a sum of Rs. 4,952-0-6 was expended by my office. Thereafter, until the close of the season's work in May, the expenditure at both sites amounted to Rs. 15,000-0-0, and this was wholly met by Mr. Tata. The total is somewhat exceptionally large for work of this kind in India

but it is explained both by the area we covered and even more especially by the great depth to which the excavations had to be carried. The maximum number of labourers employed at any one time was something over thirteen hundred. It goes without saying that without Mr. Tata's generosity it would have been out of the question for the Department to have conducted the work on anything like this scale.

The configuration of the site at Kumrahar left very little choice in the matter of aligning the trial trenches. But, as I was anxious to make as thorough an examination of the area north of the tomb as was possible, I laid out three parallel trenches running due east and west between this tomb and the Kālu tank. Three other trenches crossed these at right angles, and were extended up to and over the edge of the tank on the north, and also to the south of the tomb where it was possible to do this without needlessly sacrificing standing trees. In general, however, it seemed best to devote most of our attention the first season to the northern half of the site. The experience of previous excavators in this general neighbourhood had led me to expect my principal monuments, or rather their ground level, at something like 20 feet below the present surface, and I had been told that the soil round about was very soft, and not only apt of itself to cave in, but rendered still more dangerous by being banded here and there with sand. This made it imperative to give a liberal amount of shoring to the sides of my trenches, if accidents were to be prevented when the lower levels were approached. But at the same time I was intent upon reaching these lower levels at the earliest possible moment, for obvious reasons. All these considerations taken together, therefore, led me to outline my six trial trenches in the first instance with a width of 5 feet only. These were the paths which I proposed ultimately to open up on the level of 20 feet below. To ensure the necessary sloping to the banks a further strip 5 feet wide was then marked out on either side of each trench, and taken down 4 feet perpendicularly as soon as the central trenches had reached a reasonable depth. On reaching this depth of 4 feet, the side cuttings were then narrowed by one foot and the excavation deepened by another 4, when the process of narrowing was repeated. In this way I gave my main trenches a head start, as it were, and as they grew in depth, cut down their banks at a somewhat slower rate in such a manner as to give them a slope of 1 in 4. Thus my three main trial trenches running east and west were designed to have a width at the surface of 15 feet, with an intended width of 5 feet, 20 feet below. This it was hoped would constitute a really thorough examination of this northern half of the site, for the width of this tract is not much more than 100 feet, and it seemed impossible that our trenches could conceivably miss anything of magnitude or structural importance at any rate.

Colonel Waddell, it will be remembered, had found a few fragments of polished Mauryan stone. These he states were met with at a depth of twelve feet, just underneath certain brick walls which he assigned to the mediæval period, and which were shown by their position to have been erected after the destruction of his pillar. These so-called mediæval brick walls very speedily began to present themselves in our trenches, as the tops of many of them lay but a few feet under the surface. Over the major portion of this northern tract, however, we encountered brick débris

instead of walls, and this débris was found to extend like the walls themselves down to a depth of some 7 feet or more. This evidently gave us what was the latest real level of occupation at this site, for neither the solitary Muhammadan tomb now standing, nor stray walls here and there which we met just under the surface, could be said to constitute any definite level worthy of consideration. Colonel Waddell's assignment of this main superior stratum to late mediæval times appeared, however, to be erroneous. The construction of the walls, wherein the bricks were laid without mortar; the very large size of the bricks themselves, which while being long and wide were generally of little thickness, and, more important still, the nature of the minor antiquities associated with these walls, all pointed to their being older than had been assumed, and compelled their assignment to the Gupta period at latest.

But although these brick structures were thus seen to be of very respectable antiquity themselves, and although it would have been more satisfactory in many ways to have cleared this upper level first, the greater importance of the expected remains lower down necessitated my disregarding these Gupta buildings at first and pressing on toward the lower levels. But in doing so the brick walls were everywhere either left intact, or minutely measured, drawn and photographed before removal, where removal proved unavoidable. Thus a permanent record of this stratum has been preserved, and is published with this paper (Pl. XLIII).

As soon as we passed the level of these walls, evidences accumulated which led me first to doubt and then within a short time to discard finally Colonel Waddell's theory regarding the Nili column. In all of our trenches, and, as the work progressed, in all portions of the site, substantial pillar fragments were encountered showing that polished surface which we ascribe to Aśoka. This of itself might not have sufficed to disprove the previous theory, but it was observable that these fragments were of widely varying colour, ranging from a definitely red tone to a neutral grey. This alone made it seem doubtful if they could all be pieces of one and the same column; and besides this, there seemed to be too many of them. The diameter, again, which was deducible from our fragments, was noticeably less than the diameter one would have expected for an isolated edict pillar, as it appeared to work out, so far as could at first be judged, at almost exactly half the diameter of the Aśoka monolith at Bakhra. This proportion was confirmed by the discovery of what was clearly enough a fragment from the top of a pillar, containing a part of the deep round orifice intended to take the metal bolt which held in place the capital or whatever else surmounted the column. From this fragment it became clear that the diameter of the pillar at top was only some 20 inches, whereas the Bakhra column at this point measures a fraction over 3 feet. The inference was thus inevitable that the ground we were excavating covered the remains, not of one huge monolithic edict column, but of an extensive building of some sort with a number of monolithic pillars.

As soon as this point was determined I gave orders that none of the stone fragments should be moved. Theretofore such pieces as had been met with had very naturally been taken up and brought together in one place to the number of fifty or more; but not of course, until the exact depth and position of each fragment

had been carefully recorded.[1] Thus this removal involved no loss and did no damage, but at the same time it seemed possible that it would be easier for me to judge of the form and position of the building if I could actually see the several fragments in their relation one to another. The pieces were so scattered that this had not appeared important so long as we were working on the theory of the Nili column.

The first result of this altered method was a false clue. On the northern side of our central east-west trench a large fragment was found, lying obliquely to the trench itself, with the one end north-east and the other south-west. In almost exact alignment with this another massive fragment appeared just across the trench and at the same level. This obviously suggested a broken column lying prone in this oblique position. I accordingly made a very narrow cutting along the line of these two seemingly connected fragments. Confirmation of the theory was then apparently found when in this cutting we came across a third piece further to the south-west; when this proved to be only one of a heap of fragments, hope kindled brightly. Surely this must be the main portion of the pillar whose upper pieces we first discovered, and surely also down below must be the base or pedestal, presumably still *in situ* if we could only find it. The encouraging pile of stone fragments was carefully laid bare without disturbing a single piece until further clearance became impossible. The pile was then photographed as a permanent record, and the pieces were carefully removed. Plain earth appeared; or rather earth with a very large admixture of ashes. It seemed possible, however, that the pedestal might still be lower down, supposing it to have been partially buried before the column was shattered. So we continued. At a depth of about a foot, another stone was struck. Hope kindled again. But as the clearance advanced it became evident that instead of the pedestal we had a second accumulation of fragments. This was certainly very mysterious, but the previous process had to be repeated. The pile was cleared, photographed and removed. Plain earth again! Never mind, we again dug downwards. Another stone, a fresh hope, another and third pile. What could it mean? This also was registered and taken up. But underneath was nothing, absolutely nothing, down to a depth of 30 feet.

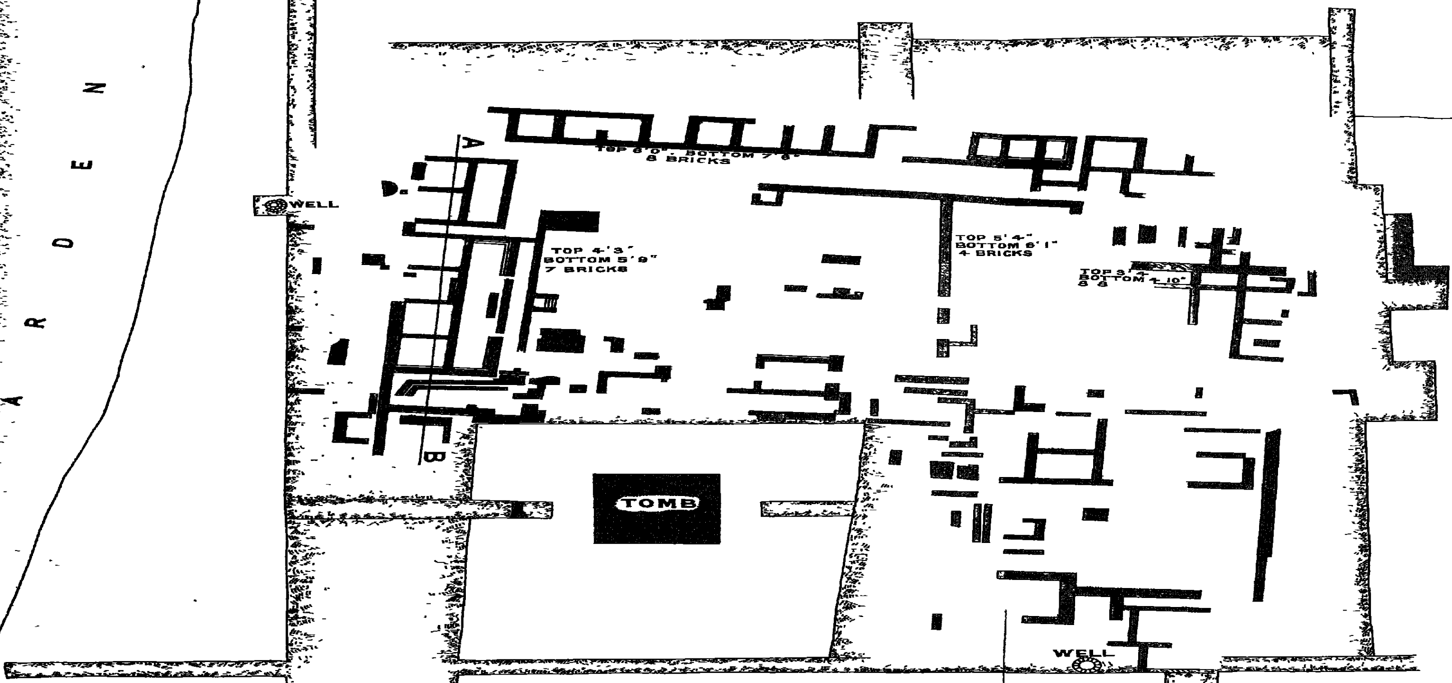
This was the first utterly puzzling development at Kumrahar. It seemed inexplicable. How could the fragments of a shattered column fall in such fashion as to lie in three heaps, one above another, each separated from its neighbour by an intervening foot of earth? The problem was not solved for many days.

However, the discovery of a fresh accumulation of stone fragments at some distance north-west of the former place afforded opportunity for a fresh effort, and we set to work again to search for the pedestal in this case also.

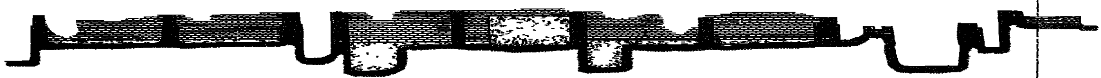
Meanwhile we had found, close to the northern edge of our northern east-west trench, a smooth slab of stone bearing in low incision an admirable figure of the *triratna* symbol, the conventional trident representing the Buddhist trinity, with the Wheel of the Law underneath (Pl. XLVI *b*). The bottom of this slab was manifestly broken off, and as I judged this to be a likely place for an inscription, I gave

[1] For the registration of antiquities at Kumrahar I am indebted to Mr. Dikshit, a Government scholarship holder in our Department, whose services were generously placed at my disposal by Sir John Marshall.

TATA EXCAVATIONS AT PATALIPUTRA.



SECTION ON LINE A.B.



orders to have a narrow slice taken off the north bank of the north trench to see if we could not find the missing portion of the *triratna* slab. This was on the 5th of February. By the evening of the 6th the cutting had advanced to such a depth that what appeared to be three piles of stone pillar fragments began to emerge. This point was reached just at the close of the day's work. The night afforded opportunity for the due consideration of this new development.

The fact that they were really three piles of fragments was speedily ascertained on the morning of the 7th. I then had them cleared as rapidly as possible, took their middle points as accurately as these could be determined, and measured them. Let us call the piles A, B and C (Pl. XLVII *a*). They were all in one straight line east and west, and lo! the centre of A was 14 feet from the centre of B, and the centre of B was 14 feet from the centre of C. This was indeed a clue. Trial pits were speedily sunk in the same alignment 14 feet to the west of A and 14 feet to the east of C and, to our immense delight, piles of pillar fragments were found in both positions. The scales had fallen from my eyes. I looked about me, and saw that the heap of stones where we were searching for the second pedestal seemed to lie at a right angle to the obvious row of columns we had just discovered. Then I remembered that in that same line, farther to the south, one solitary fragment had been met which was still lying in position. The measurements were soon taken; the heap of stones was 28 feet from our northern row, and the solitary stone on the south was 28 feet from the pillar fragments. Pits at the intermediate points disclosed the expected accumulations, and other pits sunk in various places by measurement, on the basis of evidences which then for the first time acquired significance, yielded the desired result infallibly and the leading problem of the excavation was solved. Whereas when the work began that morning of the 7th February, all that could be affirmed was that we seemed to be somewhere near some Mauryan monument, by the evening of that day we had definitely proved the fact and actually located five parallel rows of monolithic columns, with evidence for at least six columns in each row. That the northern half of the Kumrahar site marked the position of a mighty pillared hall of Mauryan date, and thus the first structural building of the Mauryan period to be located in India, was no longer a hypothesis but an established fact.

After determining the existence and main characteristic of the building, the first desideratum appeared to be to learn its extent. I accordingly selected, as involving the least digging, that row of columns which ran east and west under the north bank of our northern trench, and the row at right angles to this in our central cross trench running north and south, and proceeded to dig four series of pits to the cardinal points. At the same time innumerable other pits were started throughout the area within the known aisles to establish the existence of columns at the points theoretically indicated. This it was hoped would give us both the extent and the ground plan of the building. We were, however, able to improve upon these methods later on.

For it soon became apparent that the puzzles and problems of Kumrahar were not all solved by our finding the clue to the plan. From the very beginning of the excavations the presence had been noted of a thick layer of ashes just below the

Gupta walls. This was of course a feature of interest, but no special importance appeared to attach to it. It lay too high in the soil for any connection to seem probable between it and the Mauryan building. I took it therefore as an indication that some missing structure had been burnt in the period just before the Guptas built, but there seemed to be nothing left from which one could deduce anything as to its nature. I assumed it was a wooden building, possibly assignable to the early Christian centuries, since certain seals and coins of an early date were found among the ashes or just close above them. As the work advanced, however, my attention was drawn increasingly to these ashes, and the more I considered them the more doubt was cast on the tenableness of my over-simple assumption. In the first place, it became evident that our stone fragments were in the main among these ashes, and not below them Both ashes and pillar fragments were found to lie in a single stratum of varying thickness, some 8 feet below the surface, and just underneath the Gupta walls. Was this, then, perhaps the original level of the Mauryan building after all, only 8 to 9 feet under the surface ? It looked surprisingly as though this were the case. But this was of course entirely opposed to all previously acquired data on the stratification of Pāṭaliputra, and there were insurmountable objections to the theory on the spot itself. For example, if this was really the Mauryan level, how came it that we found so many stone fragments at still lower depths? For fragments did occur, down to a depth of 17 feet or over. And how came it that at this lower level we also found a limited stretch of what looked strangely like a bit of wooden flooring in position? These facts were not readily harmonized with the conclusion above-mentioned. But a more puzzling feature still remained to be considered. The ashes, it was found, did not, as at first appeared, extend in one unbroken level across the site. They showed curious depressions here and there. Did these perhaps indicate merely the irregularity of the surface on which the ashes fell? One would think so ordinarily. But it became evident that this was not the case, when, on examination, it was found that the depressions went down to a great depth, and with perpendicular sides below a certain point. It was furthermore ascertained that they occurred at regular intervals so that the vertical sides of our trenches, deepened, presented the singular spectacle of upright walls of clay enclosing a curious formation of ash which resembled nothing in the world so much as an extended rose-bower, or a pergola drawn in section. Another curious feature was the fact that our accumulations of stone fragments lay, as a rule, just above these vertical bands of ash, although in a number of cases fragments did occur at much lower levels among the ashes. Always among the ashes, however, and only among the ashes. Except where these vertical lines of ash came down, the soil was utterly devoid of human evidences everywhere between the main ash stratum and the wooden floor far below. Where the ashes descended perpendicularly, however, stone fragments, brick débris, nails, and even bits of wood occurred to considerable depths, almost, and in some cases quite to the level of the wooden floor itself. Elsewhere we found only yellow clay.

It was a long time before any explanation of these extraordinary phenomena occurred to me. Nor is it any wonder, really, since collectively they formed as baffling a series of unprecedented and unparalleled *Erscheinungen* as one could well

imagine. But then at last a very simple explanation dawned on me, and one which, fortunately, has squared with every fact we have been able to observe this season. The columns of the pillared hall had sunk!

I chanced to be on the train for Calcutta when this explanation flashed on me and at the earliest opportunity made a point of consulting with one of the leading building-contractors in that city as to the possibility of heavy columns sinking in the soft alluvium of the Ganges valley. It was of course impossible to burden this gentleman with the long tale of my evidences, and it is doubtful if he would have heard me any way. For he flatly refused to believe in any case that it was a physical possibility for however heavy a column to sink bodily into the earth and there be swallowed up for ever, which was the rather startling question put to him. Presumably the idea struck him as ridiculous, but courtesy and kindness led him to disguise the fact, if so, and he patiently explained the principle on which the modern builder sinks his piles, until the friction of the earth along their sides at last becomes so great that no weight added on above will sink them any further.

Somewhat reassured by this emphatic statement on the part of one whose experience gave his words authority, I returned to Bankipore, with renewed hope that the columns might be recoverable after all. We could find no traces of them, however, anywhere, and the evidence for the sinkage theory seemed so overwhelmingly convincing that necessity demanded the fullest possible examination of it. Further experiments established the fact that each and every one of these vertical lines of ash, when seen in section, flared at the top in horn-like fashion, the wide end being of course the point of union with the main ash stratum. Moreover, when the line was cut across horizontally anywhere below the horn-like portion, or even through this, the form shown was invariably a circle. The third point was that such stone fragments as occurred within these circular tubes of ash were not in any position in which they could conceivably have fallen in the first instance. Witness the three curious piles of stones we had removed in hunting for the first pedestal, where earth intervened between the several accumulations. The only possible explanation seemed to be that, having originally fallen on the level of the main ash stratum, they had subsequently slipped or fallen down, at varying times, into their present position. Indeed, up nearer to the main stratum, where the lip of the horn began, we could observe stone fragments visibly toppling over toward the upright tube as though even now in the process of being drawn into it. Incidentally this explained the horn itself. Moreover, some of the Gupta brick walls, even, showed a marked subsidence here and there, but only where they happened to approach a tube of ash. This latter fact was specially important, as it explained our finding brick débris among the ashes and the stone fragments at low levels, and also how it happened that so many of the Gupta walls had been overthrown. The chain of evidence was thus complete, and despite the pronouncement in Calcutta, and despite also the disappointment to my hopes, I was compelled to accept the sinkage theory as the only possible working hypothesis for the excavation. Its importance demands that it be now set forth as a consistent whole.

In the first place, the primary fact that between the main ash stratum and the Mauryan floor the earth is free of human evidences, can only be explained,

apparently, by assuming that this clay is the deposit of a flood. The occurrence of a belt of virgin soil 8 or 9 feet thick between two levels of occupation is wholly inexplicable on any other hypothesis I can think of, and we know that floods of this nature have occurred at no great distance from Patna, and that a similar depth of riverine deposit occurs around the base of the still standing Aśokan column at Bakhra. The flood at Kumrahar evidently took place while the building was still standing, and the silt deposited by it not only covered the floor some nine feet deep, but incidentally buried the standing columns to the same depth, or for nearly one-half their entire height, and those that were so buried were of course thereby held upright from that time onwards. During the course of this flood, therefore, the building must have presented an appearance similar to that of some of the temples in Kashmir, where to this day the tops project above a flood which conceals all the plinth and much of the height of the building.

How long this flood endured we have no means of knowing. Neither can we say with certainty at what period it occurred. It is possible, though, to make a reasonable conjecture as regards the latter point at least. We have seen above that frequently among the ashes, or closely on the same level with them, the excavation has produced coins and a few other remains of the early Christian centuries. These antiquities are certainly older than the Gupta brick walls. Had the flood not taken place before these early centuries, the presence of these early coins here would be curious indeed. In that case they should have lain on the level of the Mauryan floor, or close above it, if the building continued in occupation in its original condition during the period the coins were current, and if the flood intervened between their age and the coming of the Guptas. The inference is easy, therefore, and such evidences as we have make the idea seem probable, that the flood took place somewhere about the time of Christ, or in the centuries immediately following, and that the coins, etc., of this period which we find below the Gupta walls indicate a restricted use of the Mauryan building even in its imperfect condition after the flood subsided. The top of the silt must then have done duty as a floor; and although the building must have suffered sadly as regards loftiness and dignity, there is no reason to suppose that it was uninhabitable. If the columns were 20 feet high (they were presumably more) the flood would still have left some 11 feet or more between the silt and the ceiling, and this is no mean measurement for an Indian room to-day. It is thus both possible, and from the evidences probable, that for some time, perhaps even for centuries, the pillared hall was utilized as such after the subsidence of the flood.

However that may be, the hall was certainly burned down after the 9 feet of silt had been deposited over the floor; and as the Gupta buildings rest almost directly on the ash, we may conclude that this fire took place somewhere about the 4th or 5th century of our era. The Gupta walls can hardly be later than the 6th century in my opinion and may be earlier (Pl. XLIV). Fa Hien, it is true, declared at the beginning of the 5th century that Aśoka's palace was still standing; but, as regards the suggested 4th century date for the fire, we have no guarantee that Fa Hien ever set eyes on this particular one of the palace buildings, and as regards the 5th century date, it is not inconsistent with Fa Hien's statement. The

a



b.



a. & b. KUMRAHAR: GUPTA REMAINS.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C

later date seems to accord with the majority of the evidences. Witness further the coins of Chandragupta II Vikramāditya, who reigned from 375 to 413 A.D.

Judging from the timbers that have been preserved to us, it is clear that the woodwork of the superstructure and the roof must have been extremely solid and massive, and that the heat of the final conflagration must have been enormous. It is evident that it sufficed to crack off innumerable fragments from that portion of the columns which rose above the silt, and also to expand the metal bolts which fitted into the socket holes observable in the top fragments of pillars which we have recovered. It is to this expansion of the copper bolts that I attribute the universal vertical cleavage which our large fragments show, and I am assured by Dr. Caldwell, Professor of Chemistry at Patna College (to whose learning and sympathetic enthusiasm I have been indebted for much help throughout the excavations), that the form of breakage shown by all these socket holes is precisely such as to confirm this theory. Colonel Waddell, having to deal with only a few fragments of one supposititiously single column, predicated lightning to explain the vertical cleavage he observed; but the impossibility of applying this theory to many scores of columns is too obvious to need emphasis. The main cause of the breaking up of the columns I therefore trace to the fire itself. But it is clear that much of the minor chipping of the stone was done deliberately by the Gupta builders, who used the pieces so derived in laying a rough pavement over a portion of the site. This shows clearly enough that these people knew of the existence of stone fragments at this place, and it is possible that some if not all of the horizontal breakages are to be attributed to them also. Many of the shattered stumps of the columns must have projected above the silt and ashes after the conflagration, and the Guptas may well have found it necessary to knock these off in the process of levelling the ground for their brick erections. But by far the major part of the breakage is undoubtedly due to the fire itself. This explains how it happened that the fallen fragments lay so close to their original positions as to permit of our recovering the ground plan from a mere measurement of these fragments as they lay. That this was possible is a very remarkable circumstance.

After the fire the then surface of the ground, some 9 feet above the original surface of the Mauryan floor, was very thickly strewn with ashes and with the broken fragments of those upper halves of the columns which had been exposed to the fury of the flames. These latter lay prevailingly in heaps at intervals of 15 feet, corresponding with the original positions of the columns. And underneath these heaps still stood upright those lower halves of the columns which the silt had buried, and which, through the mere fact of being buried, escaped the destruction and disintegration to which the upper halves were exposed. The site was in this condition still when the builders of our brick walls came on the scene. They merely smoothed the surface and erected, just above the ash, those brick buildings which we now find prevailingly in a ruined condition. And we can see well enough why they were ruined.

At some time subsequent to both the fire and the erection of these Gupta buildings, when the level of the subsoil water had risen to soften the earth underneath, and when the wooden supports decayed on which the still standing but buried

shafts of the columns rested, these shafts inevitably began to sink, naturally in a vertical position. As the columns sank, they left vertical circular cavities in the silt which had enveloped them; and as these cavities lay just beneath the heaps of ash and fallen débris both these ashes and the stone fragments were drawn down into the vacua (Pl. XLVI *a*.) At the same time all those brick walls which happened to cross points where this subsidence was taking place, themselves collapsed, and their débris was drawn down into the hollow tubes along with the ashes and the stones. This falling mass, however, could not sink indefinitely, but only through that portion of the cavity which was not filled by an inrush of earth from the sides. Throughout the 8 or 9 feet of dry clay which lies between the main ash-stratum and the floor, the earth was hard and firm enough to hold, and presented no lateral thrust to fill the hole. But below the level of the subsoil water the conditions were radically different. Here the saturated earth is extremely soft, and as the heavy shaft passed downwards through this belt, the mud inevitably closed in above it and itself filled up the vacuum. Thus at this point the débris following after the column from above was naturally brought to a halt. Doubtless the heaviest pieces of the stone débris were able to penetrate this saturated soil, and we can picture these as following the descending columns even now (Pl. XLVIII). But the main volume of ash and stone was of course arrested where the lateral filling set in, that is to say at the level of the subsoil water, which very nearly coincides with the level of the ancient floor.

The question now arises how fast and how far these columns can have sunk. We may imagine that at first they sank but slowly. So long as the major portion of their lengths was embedded in the hard clay above the subsoil, this clay must have exerted considerable pressure, and its friction retarded the sinking very greatly. It is to be noticed, however, that the weight of these columns per square foot of basal surface was great enough to overcome these originally restraining forces. Therein lies the fallacy of the Calcutta pronouncement, for it is precisely at this most vital point that the analogy between our columns and the illustrative pile breaks down. In the case of the pile, it is the continually growing length that involves the increase of lateral friction upon which its final halt depends. In the case of our columns, however, the length was a fixed quantity from the beginning. Instead therefore of the restraining friction increasing as the columns sank, it very rapidly decreased. For, granting a weight sufficient to move the columns downwards from their original position, it is clear that, as they sank lower and lower, the friction exerted by the dry earth became increasingly less, as more and more of the column passed into the soft subsoil. This latter medium can have exercised only a comparatively negligible amount of resistance, so that finally, when the top of the descending column got right below the floor, and the entire length was free from the restraint of the dry soil, the rate of sinkage must have reached its maximum. From that point onward the columns must have sunk with fair rapidity, and so far as I can perceive, must still be sinking now.

There are, however, two contingencies, either one of which may have sufficed to bring them to a halt. The first, obviously enough, is a solid stratum somewhere in the soil. If any such belt exists, our columns are presumably lying on it, and whether they are recoverable or not will depend upon the depth at which that belt



a. KUMRAHAR: WOODEN PLATFORMS IN MAURYAN PALACE, FRONT VIEW.



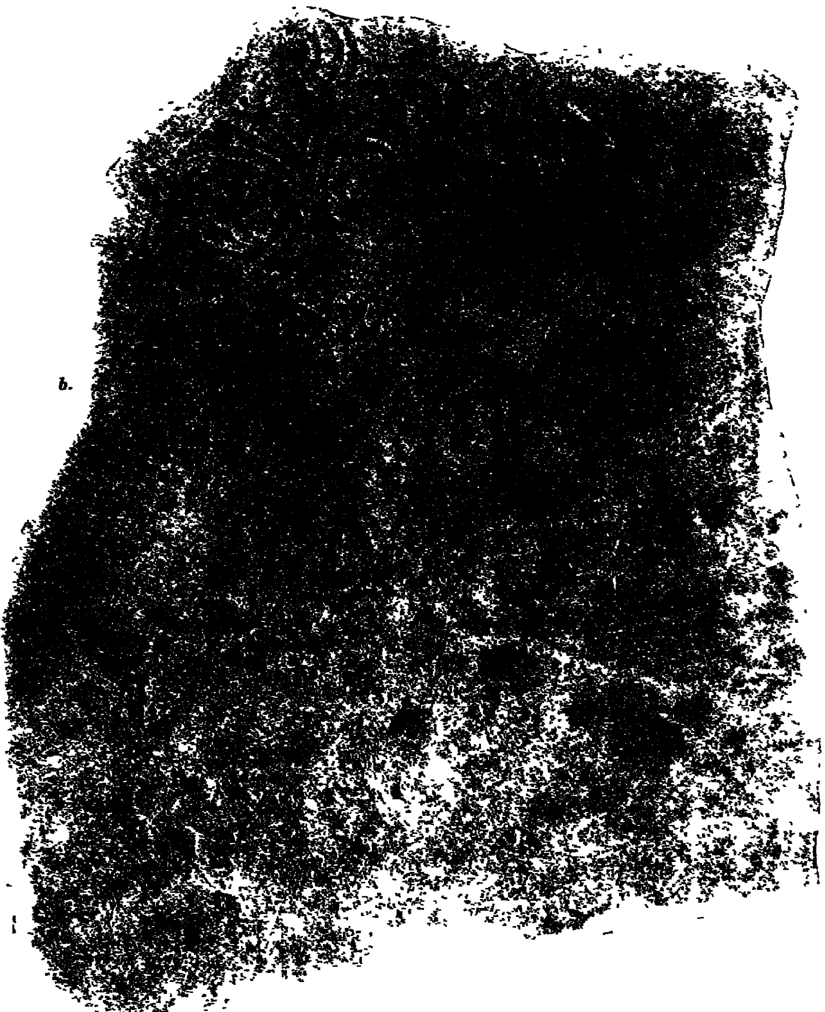
b. KUMRAHAR: WOODEN PLATFORMS IN MAURYAN PALACE, SIDE VIEW.

LITHOTYPE BY WALTER GRIGGS, LONDON W D

PLATE XLVI



a. KUMRAHAR: ASH PITS OF MAURYAN COLUMNS.



b. KUMRAHAR: TRIRATNA SLAB OF THE SUNGA PERIOD.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

occurs. To my regret, however, I must report that so far as I have been able to test the point, no such stratum appears to exist within a hundred feet of the surface. Mr. Sherrard, of the Agricultural Department in Bihar, very kindly gave me the use of his boring apparatus and his trained men to drive down a tube for the examination of the lower strata. But the stratification thereby disclosed is not encouraging. Between the Mauryan floor and a depth of 30 feet occurs only the soft clay of the subsoil. Below this point the clay is sparingly mixed with small and isolated kankar nodules, which get larger, but not noticeably more numerous, as the depth increases. Below this level comes fine sand. It may perhaps be significant that, at depths reported to me as 84, 90 and 91 feet, the tube came down upon hard obstructions in three different portions of the site. A good deal of difficulty was experienced in penetrating further at all three points, and it is barely possible that the first of the three measurements named above was inaccurate, and that something like a solid stratum does exist some 90 feet below the surface. It does not seem probable however, for there was no apparent thickness to the obstructions met with. Once the tube had fractured them, it passed down readily enough. The material, I may add, appears to be calcareous sandstone. The *mistris* managed with some pains to bring up portions of the broken obstructions in all cases, and two of these I sent for examination to Mr. Coggin Brown of the Geological Survey. This officer very generously devoted considerable time to their examination, and reported that one piece was calcareous sandstone, and the other a hardened kankar. Both these specimens came from one and the same boring. The other two yielded the calcareous sandstone only, so far as I can judge. But the evidence appears to be against the occurrence of any real stratum of this sort. The final depths reached, I should add, showed only a coarser sand, which filled the boring tube and clogged it to such an extent that deeper probing was impracticable, and we had to cease our tests a little more than 100 feet below the surface.

As far as any overtaking of our columns is concerned, therefore, the boring operations were not successful, and it appears only too probable that they have sunk beyond recovery. But the results obtained confirm the sinkage theory perfectly. When Mr. Sherrard's men first came to me I was informed that in other parts of the district, where these *mistris* have had great experience in sinking tube-wells, the usual rate at which the tube could be driven was 8 feet a day. At Kumrahar, however, the tube went down 42 feet the very first day, or, with the 14 feet of preliminary excavation we gave it, a total of 56 feet from the surface. That this was unprecedented in the experience of the workers was only too evident from the almost comic dismay of the man in charge, who appeared to be distressed lest his superior officers should hold him to a similar rate of progress in future. He apologized for the fact as such by saying he had never seen the soil so soft anywhere else in either Patna or Gayā Districts, and there is no reason to doubt the truth of his assertion. Granted, though, that the soil at Kumrahar is so exceptionally soft, the sinking of the columns becomes a physical necessity.

I would point out furthermore that the fact of our not having overtaken the columns within 100 feet is no argument whatever against their having sunk. For reasons mentioned above, it appears probable that they began this sinking process

some thirteen or fourteen centuries ago, so that if they had sunk only 1 foot in ten years they would still be below the lowest point we were able to reach, and this is an incredibly slow rate of sinkage when the softness of the soil is borne in mind.

The other of the two contingencies likely to bring the columns to a halt remains to be mentioned. As the boring has established, the soil below a depth of 30 feet contains isolated kankar nodules. These are not thickly enough placed to constitute a solid stratum (witness the depth to which the tube descended the first day) but it is certain that as each column passed through this belt it must have struck against these nodules one after another, and, gradually accumulating them, must have pushed them downwards with itself. Some of these nodules must have been thus caught by the edge of the descending shaft, so that part of them projected as the column bore them down. The accumulation of such laterally projecting nodules, through a course of many centuries, will necessarily have extended the square area of the surface at the bottom of each column; and as the rate of sinkage is dependent upon the ratio of the weight to the square foot of basal surface, this rate must have been decreasing as the area grew. This process, if continued long enough, must inevitably bring the columns to a halt at last. But it is of course quite impossible to conjecture at what depth this will occur.

Such, then, is the interpretation and synthesis of the evidences at Kumrahar, so far as I am able to read them. The conclusions, startling as they may appear, are after all quite simple and reasonable, and are imperatively demanded by the facts. No other theory has so much as been suggested which faces these facts squarely, or which could possibly be invoked for an explanation of them. Nor do I believe that any other is either possible or necessary.

Only one detail requires to be mentioned as militating at first sight against my argument. Here and there, in the case of a few of the ash circles, we have found, at depths varying by 4 feet or more, but all 14 feet or over, fragments of wood in a horizontal position, which one is tempted to explain as portions of the original supports on which the columns rested. If this could be absolutely established, it would seem to involve the abandonment of the sinkage theory altogether, however much it might square with the other facts we can observe; for it is obviously impossible that the stone columns could have gone through their wooden supports and left no trace of their passage. In one single instance the wood in question really does look as though it lay in position, as though it were actually built into a sort of platform as it now stands; but even here further excavation is needed before the point can be finally determined. In none of the other cases are the appearances so favourable to this conclusion. The varying levels at which the fragments occur, are very direct evidence against their being remnants either of a floor or of isolated piles on which the pillars rested, for we certainly dare not assume that the several columns rose from a bewildering variety of levels. One further point to be mentioned is equally direct evidence against the wood being now in any original position, namely the fact that many of the fragments are isolated ones, and show unmistakable marks of having been charred by fire. Had they been fragments of either the original floor, or of foundations laid for the columns individually, they must have been protected from the flames by 9 feet of solid earth,

and their being charred is thus rendered a physical impossibility. They must, therefore, be pieces of the original roof, which have fallen into the cavities left by the sinking columns precisely as the ashes and stones and bricks fell in. This again explains the varying levels at which these wooden fragments occur. Thus even these do not demand any modification of our theory. There is no proof whatever that they lie as they were laid, and substantial reasons exist for believing the contrary.

Only one real alternative to the sinkage theory has been propounded, and that is the obvious one that the site has been devastated by human agency, and the unbroken bases of the columns, and all other usable fragments, including the capitals, been deliberately removed for use elsewhere. In other words, that the site has been used as a quarry for the value of its stone in these alluvial plains. This theory is superficially attractive, and is recommended by its simplicity, and by its abstract plausibility, and I myself should have been among the first to adopt it, had the visible facts of the case not prevented. These facts are one and all absolutely opposed to the possibility of such a thing. The remarkable regularity with which the fragments occur in heaps fifteen feet apart on the level of the ash stratum is the first obvious argument against it. Do vandals ever pile their wreckage with such mathematical nicety? The unbroken stratum of the ashes themselves is further proof; for could this stratum have remained undisturbed through quarrying? Indeed, this alone is completely subversive of the whole idea, for the belt of ashes has served as an automatic register of every act of vandalism or semi-vandalism that has taken place since the building was burned; and such sporadic diggings as the Guptas made, and such excavations as Colonel Waddell effected, are all infallibly registered and recorded by these tell-tale ashes in a manner which is as inevitable as it is unmistakable. Barring a few isolated spots, then, we can affirm positively that the soil has not been disturbed below the level of the main ash stratum. Again, if the columns were removed for use elsewhere, they must have been so removed before the Gupta brick walls were built above them, as many of these walls are still standing. But if this was so, how came their cavities to be filled with débris of these walls, which clearly cannot have existed at that time? This same argument is also valid against what is really the only possible theory as to how the columns could have been removed any way. We have to assume that, if they were so removed, they were first excavated, to set them free of their enveloping silt. Such other objections as I have raised above to this removal theory would have to go by the board, if it could be shown that excavations around each column had been made of a nature pointing to removal. Our vertical ash shafts would then be seen to be merely the cavities from which the columns had been digged, and which the vandals then filled up with ashes and such stone fragments as they did not require. This would also explain the general depth to which the ashes go down, and such wood as occurs at a low level could then be assumed readily enough to be in its original position if necessary, the charred bits being understood to have formed part of the rubbish with which the vandals filled the holes left by the columns as they took them out. This theory would be overwhelmingly convincing if it were shown to be possible, but to my mind it simply defies credence for the

following very simple reason. The diameter of the one column whose base we have recovered, and whose description we must postpone for the moment, measures 3′6″. Putting aside the question whether this diameter was or was not further extended by certain adjuncts to be mentioned later, and taking 3′ 6″ as the full diameter, let us compare this with the diameter of the ash circles. Up above, where the ash-tubes first descend from the main stratum, they flare in horn-like fashion, as has already been noted. This is due to the gradual breaking down of the edge of the circular hollow as the heavy stone fragments poured into it. Here of course the diameter is wide, varying from 6 to 7 feet, or even a trifle over. But even so, it leaves so little space between the shaft and the side of the tube that it would seem almost incredible as an excavation by human agency for the removal of the pillars. But when one tests the case lower down, from a point a few feet below the ash stratum down to the end of the ash tube, the impossibility becomes apparent; because, where the sides of the tube are vertical, the diameter in one test case was found to be only 4′ 9″. As this leaves a margin of only 7½ inches round about the column, assuming the smallest diameter conceivable for the column, it is absolutely certain that no human hands can have dug these circular holes while the columns were in position, as no standing room whatever is left for the digger, who had some 6 or 7 feet of depth to penetrate. Even if we could grant the possibility of human agents having accomplished such a miraculously narrow excavation around the standing shaft, the problem would even then not be solved; for how are we to assume that the heavy upright shafts were then removed? No machinery known to me would suffice to draw such massive monoliths straight up out of the earth, even at the present day, and it would certainly be rash to assume that any existed in the dark age just before the Guptas. It took the Public Works Department something like three years, and involved an expenditure of some Rs. 10,000 to lift and remove a single fallen column of Aśoka's date from the soft pit into which it was sinking at Rāmpūrwā, without any miraculous narrowness of excavation; and I for one refuse to believe that in the 5th century A.D. the primitive Beharees were so much further advanced than we are now, that they could draw Aśokan monoliths from the jaws of Mother Earth after the manner of a dentist. No; since the columns must have disappeared either in an upward direction or downward, I prefer to abide by my original theory of sinkage.

It was through the determination of these ash circles as the equivalents of the original columns that we were able to fix our measurements with accuracy. As I noted above, when we got our first clue to the plan of the pillared hall, we judged the distance from centre to centre of the piles of fallen fragments to be 14 feet. On clearing adjoining ash circles, however, it was found to be definitely 15 feet instead, probably 10 Mauryan cubits. In recovering our ground plan, therefore, we removed the main ash stratum, and carefully cleared the circles under the heaps of stones, and in this way obtained an automatic drawing of the hall, executed in the ashes of its own decay. For in every case, save one, the expected circle of ash appeared underneath the pile of fallen fragments disclosed by our measured pits.

Turn now to the one exception to the rule, which is one of the most gratifying points to be mentioned this year. On clearing the ground where we expected to find

he third column from the west in the sixth row from the north, to our surprise, no ash circle appeared. In its stead, we came upon what at first seemed a large fallen fragment, but which, to our joy, turned out to be a fallen pillar. This then is an exception to the otherwise apparently universal rule of sinkage, but it is merely the exception that proves this rule; it does not disprove it. The explanation is easy. For some reason or other the foundations of this particular column were weaker than the others. They were therefore affected by the flood more seriously than were the others, with the result that this particular column was overthrown while all the rest remained upright. For it is clear enough that it fell while the flood was in progress. It lies in a recumbent position, but not actually level with the ground. The upper end is 3 feet at least above the lower. The lower end therefore indicates with some closeness the original level of the floor (it had pulled up a bit owing to the shock of the fall), while the three feet of earth between this level and the upper end of the column can only indicate the amount of silt dropped by the flood up to the moment when this pillar fell. Had it remained standing until the total 9 feet of silt was all deposited, it would of course have been held upright just as the others were. On the other hand, if it had fallen before the flood began, it must have fallen to the actual floor, and in this case we should have found it in a truly horizontal position. Its having fallen midway in the course of the flood seems, therefore, an inevitable conclusion; and this being the case, the fact that this one column has not sunk has no bearing on the sinkage theory as regards the others beyond incidentally confirming it. For it shows that, if the others had not been held upright (which involved their ultimate sinking), they would all alike have been lying prone for us to find. As regards the theory of spoliation, on the other hand, this existing column is very strong evidence against it. This theory, with the existing ash-circles, implies a very accurate knowledge of the ground plan of the building on the part of the hypothecated vandals. Why then did they take all the rest and leave this one? For although the column was not upright, it was exactly in its proper position for all that, and any vandals exploiting the site for its stone must inevitably have come upon this column in its turn.

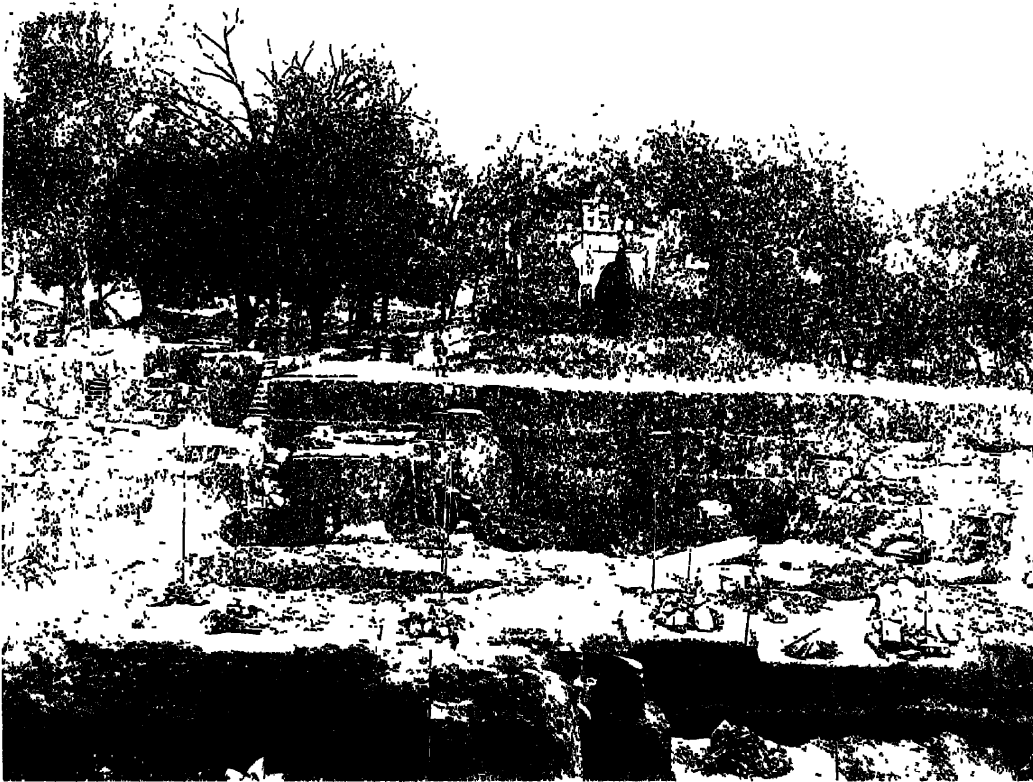
But to return to the description of the column itself. It is not complete, as the top portion is missing, but we have the entire lower part of the pillar for a length of 14′ 3″ in almost perfect condition. I need not point out how useful and how gratifying this is. Nowhere else have we a single fragment of a base of any kind, and this single example thus enables us to answer a number of questions which must otherwise have remained matters of doubt at best. We see in the first place that none of the columns had any pedestals. The shaft is smooth and polished right down to the base, as, I believe, is the case also with all the other Aśoka columns known in India.[1] This shows further that it must have merely rested on the floor directly without anything in the nature of a socket hole. For why should the builders have polished the entire length, if part of it was to be concealed? The base itself is carefully smoothed, but of course not polished, and bears a number of interesting symbols and masons' marks (cf. Pl. XLVII *b*). Among them a set of

[1] All the Aśoka columns which I have examined are polished as far as the original floor level, but rough-dressed below. [Ed.]

three rows of three circles each is conspicuous, and also the symbol ȣ. I am not able to offer any explanation of this symbol, which I believe has long been familiar in India. One point of interest in regard to it may, however, have escaped notice, and that is that very similar marks occur on certain of the Achæmenian monuments of early date. In figures 12 and 13 of part I of Dieulafoy's great work on "L'Art Antique de la Perse" (pp. 11 and 12) almost identical symbols are shown from the "*Takhté-Madérè-Soleiman*" and from certain stones at Behistun, the only divergence being in the length of the upright line and in the greater roundness of the base, which in the Achæmenian examples is a true circle. Dieulafoy, from the similarity of the mason's marks in these two places, claims (p. 11) that their occurrence on the "*takht*" tends to prove that Persians or Medes were employed on its construction, and a similar argument would seem possible at Kumrahar. It is of course well known that the style of capital employed by Aśoka shews very strong Persepolitan influence, and Sir John Marshall holds with reason that Aśoka must have employed, even if he was not thefirst to introduce, Greco-Persian artists or artisans. Would it be going too far to claim that this peculiar mason's mark at Kumrahar, slight as it is as evidence, is nevertheless in the line of confirmation of Sir John Marshall's contention? The predication of an Achæmenian source for it originally would certainly not be out of harmony with such evidences as do exist in Aśokan art and architecture.

But one feature of this column remains to be mentioned, which is no less interesting than this symbol, and that is the presence, some 5 feet above the actual bottom of the shaft, of four roughly square bosses projecting slightly from the surface of the pillar, one on each of the four sides. Three of these are nearly flush with the column, and show a roughened surface which may either be the result of breakage or indicate an attempt to smooth the surface after it had become broken. The fourth projects further and bears more unmistakable signs of being merely a fracture, for here a definite neck is observable whose surface is polished like the rest of the column. I have failed so far to find any exact parallel to these curious bosses on this column either in India or elsewhere in the ancient world, and it is therefore not possible for me to do more than guess as to their original form or purpose. It appears certain, however, that they projected originally some distance from the surface of the pillar, and as they are an integral part of the monolith, it is clear that they were merely left in the stone, or that the pillar was fashioned from a block large enough to include these projections. This much is obvious enough. But whether they supported ornamental medallions or served some other purpose is less certain. Dieulafoy pictures a certain ancient pilaster from the front of which three sculptured heads advance much in the fashion of our Kumrahar bosses, so that the idea that the latter supported some form of ornamentation merely is not impossible even by analogy. But it is not probable to my mind. For reasons to be detailed later I am inclined to think that they must have involved some complete and permanent extension of the diameter of the column on all sides, and this would seem to imply that they supported some band of stone which encircled the column as a girdle. This of course calls for an almost incredible amount of labour, since this girdle must have been cut out of the single block from which the pillar was formed.

TATA EXCAVATIONS AT PATALIPUTRA.



a. KUMRAHAR: GENERAL VIEW OF EXCAVATIONS SHOWING ROWS OF POLISHED SANDSTONE FRAGMENTS.



b. KUMRAHAR: POLISHED SANDSTONE COLUMN.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

But it is quite certain that the projecting bosses were so cut, as has just been mentioned, so that the assumption of a further inch or two becomes less unreasonable than might at first appear. And besides this, the square monolithic rail at Sārnāth has already acquainted us with Aśoka's utter lavishness of human labour. I believe, therefore, that these four bosses held an encircling girdle, which was so essentially part of the column itself that it was able to sink with the main shaft without being separated from it, which explains the fact that the diameters of our ash circles are greater than the diameter of the actual shaft itself. It is also possible in the absence of all evidence for a socket hole or other basal support, that on all four sides of the column, vertical bands of stone, or stone uprights, some 6 inches wide, descended from this girdle to the ground, serving as supports to the pillar to prevent its falling over; in other words, that these bosses supported not only an ornamental girdle but also a sort of substitute for a pedestal which was of direct utility. It must have been rather a delicate undertaking to balance these columns without some such extension of the diameter at the base, but of course there is not a shred of evidence concretely for any such uprights at all, and the suggestion is to be understood as guesswork pure and simple. The one thing that appears absolutely certain is that the bosses did not extend far enough to constitute railings, as it were, connecting up adjoining columns, as has been suggested. For if this had been the case, since the bosses are only some 5 feet from the ground and occur on all four sides of the pillar, the hall would merely have been divided into a series of closed pens, definitely shutting the building to access of any kind!

With the exception, then, of the one place where, because of the actual presence of the column, no ash circle appeared, ash circles were met with at regular intervals throughout the northern half of the site, giving us up to date eight rows of columns, with ten columns in six of the rows, and seven and five each in the seventh and eighth row respectively (Pl. XLI). But whether this is the full extent of the building or not is not even yet certain, because on attempting to clear what seemed to be the western side of the hall we came upon another ash circle precisely like the rest and in exact line with the sixth row from the north at a distance of 30 feet from the most westerly column of that row. This appears to be indicative of at least two further rows running north and south on the west of the hall, but it was not possible to ascertain within the limits of the present season's work whether these rows really exist or not. Again, on the extreme east certain circles appeared to the east of what otherwise would seem to be the eastern limit of the building, which by their smaller diameter appear to mark the presence in this position of columns smaller than those in the main body of the hall. One similarly small circle has also been discovered on the extreme north, but I cannot yet determine whether these indicate porches, or whether there was rather an outer row of small columns on these two sides. Possibly the main difference between the two classes of pillars consisted only in the absence of the encircling girdle on those which edged the hall. These three sides of the building thus demand further exploration before anything definite can be affirmed as to the extent of the hall in these directions. But at all events, eight rows of columns have been definitely proved, and these suffice to show how mighty and imposing the structure must have been.

South of the area occupied by these eight rows of columns, a surprise awaited us. We had sunk trial pits at distances of 15 feet in the search for further columns in that part of the site which lies east of the Muhammadan tomb, and had met with stone fragments at the usual depth at points 15 and 30 feet south of the eighth or southern row of the pillared hall. We accordingly felt sure that underneath these stones we should find the anticipated ash circles, as there seemed no reason to suppose that the building stopped with the seven rows theretofore discovered. But strange to say, no ash circles appeared. On the contrary, at a depth of some 15 feet beneath the surface, and at a point 43 feet to the south of the second column from the east in the eighth row, we came upon what appeared to be beyond question a stretch of well laid wooden flooring. This was a point of fresh interest, and as it so chanced that this discovery was made simultaneously with an announcement that the Royal Commission on the Public Services were to visit the site a few days hence, special efforts were made to clear as much as possible of this floor before their coming. The great depth of earth above the wood made the clearance an arduous task, but thanks to my assistant, Babu Hari Das, everything was managed very well and I was enabled to lead the Royal Commissioners over some 20 feet or more of what I explained tentatively as part of Aśoka's ancient floor. To the inevitable question as to why it was that this portion had chanced to be so well preserved when all the rest had gone, I was of course unable to make any satisfactory reply. It seemed, indeed, a mystery. But the Commission had hardly left Bankipore before this mystery was solved, only to give way, however, before a greater one whose solution is still outstanding as I write. For the further clearance of this floor on all four sides disclosed the fact that it was no floor at all. The wood extended for some 30 feet north and south, and over a width of 13 feet east and west. But on the east side (and later on the west also) a very sharply defined edge appeared, which led us downwards until it became evident that we were dealing with some wooden structure, whose side we had at last recovered. This side was found to be vertical, and to be in almost incredible preservation, the logs which formed it being as smooth and perfect as the day they were laid, more than two thousand years ago. As we dug, the depth continued, until at last we reached the base and found the actual depth of wood to be 4′ 6″. The four sides were then rapidly cleared, and there stood forth a great wooden platform, 4½ feet high above its base, 30 feet long and 13 wide, bound by upright wooden posts at intervals along its sides, and at intervals also down the centre, so far as we could judge. This was indeed a new development, and gave rise to innumerable speculations and to really great public interest. The latter, indeed, threatened to become so pressing and insistent that I was rendered doubtful of the safety of the structure and appealed to Mr. Le Mesurier and Mr. Weston for the deputation of a police guard to prevent the examination of the platform being unduly expedited by unauthorized, if interested, parties. For the rumour flew through Patna that we had a royal treasure chest of unknown possibilities. The unknown nature of the possibilities I was myself quite ready to concede, although the treasure chest theory was almost the only one that did not seem based on reasonable grounds. But it would serve no useful purpose to re-state here the ideas and explanations which occurred, whether to myself or to the

PLATE XLVIII.







a b & c: KUMRAHAR: ASH PITS INDICATING THE DOWNWARD PROGRESS OF THE MAURYAN COLUMNS.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

many who visited the spot and contributed their speculations to the common store. It was soon evident that we were all wrong, anyway, for just as I was beginning seriously to believe that it might be the platform of the Royal Durbar hall, the pillars along the sides having supported a canopy, the discovery of a second platform on the east, and parallel to the first, upset all existing calculations. Shortly after this, yet a third platform appeared, west of the first, and then the only course left us was to suspend judgment and trench both east and west.

The result of this trenching, up to the close of the season's work, has been to discover a series of seven wooden platforms lying on the south of the pillared hall, and, owing to the fact that the tomb has closed a portion of the site to examination, so far as is known only to the east of the tomb itself. It is more than probable that other platforms similarly occur underneath the tomb, but such trenching as we could carry out at the end of the season, on the west, failed to show any in this portion of the site. Five of the seven platforms have been entirely cleared, the sixth only partially, and the seventh merely determined by a cross trench; for the subsidence of one of the banks near the tomb warned us to desist from further cutting at that point. But as all the platforms show precisely the same features, we may safely assume that the two which have been so far only partially examined correspond to those which we have more adequately explored (Pl. XLV).

The first fact to be noted is that what we have hitherto called the "first" platform proved to be really a pair of platforms side by side, the narrow opening between the two having been so filled in with earth and sand that the dual nature of the structure did not at first appear Thus all the platforms have the same general dimensions, 30 feet in length, 5′ 4″ in width and 4½ feet in height from the base, and all have the same main characteristics. Thus all show the stumps of upright wooden posts at intervals on either side, while other upright posts stand here and there between the platforms and not visibly connected with them. The most noticeable feature of these posts is that they overtop the actual platforms, and that, whereas throughout that portion which rises above the bases of the latter they have all suffered severe decay, underneath the level of the ground on which the platforms stand, they not only descend for another 5′ 7″, but are in absolutely pristine condition where they are so embedded. These facts would seem to indicate that when these platforms were originally built they were not covered up to the level of their tops, but stood free of the soil on the level on which their bases rest; had they been buried from the beginning there could have been no reason for sinking these posts to any such great additional depth, nor would the decay of the upright posts have been specially marked from the bottom of the platforms upwards. There is even a structural reason, so far as I can interpret the evidences, for coming to the same conclusion, namely, the presence at either end of each of the outer logs forming the long sides of the platforms, of a rectangular cutting which penetrates only to one-half the depth of the log. These cuttings taken collectively form vertical lines of square holes at either end of each side of each platform, and can only have served for the support of something inserted into them. I have no suggestions to offer for the solution of the special problem these curious holes raise, but so much at least seems evident, that they must have stood clear and free of enveloping soil or else they

would hardly have been usable at all. It appears to me therefore to be reasonably certain that the platforms originally stood free, and the point is one of special importance for several reasons. In the first place it would seem to prevent acceptance at the outset of what is in many ways the most plausible and probable explanation of these platforms which has yet presented itself, namely, the theory that they constituted merely the foundations of specially large and heavy pillars in this portion of the hall. Even so, this theory demands consideration.

In the first place, then, let us revert to the fact already mentioned, that when we sank our initial trial pits over these points we did meet with the expected stone fragments, although of course no ash circles lay under them. This, and the corollary of five of the platforms being in line with the known rows of columns on the north would certainly seem to point in favour of the foundation theory. And the fact that their tops are at just about the level we have been obliged to assume for the floor in the main hall, is again in perfect harmony with the same assumption. The question at once arises, why were such extraordinary foundations laid for the pillars here, when all the evidences show that no such massive structures were deemed necessary throughout the remainder of the site? But this is not necessarily destructive criticism, for several answers could reasonably be given. The soil might, for example, have been either actually or supposedly softer at this point than anywhere else, or the columns here might have been of special size and weight and therefore have demanded special treatment. Moreover, there would seem to be at least one concrete bit of evidence tending to support this latter view. For, curiously enough, it was just above one of these platforms that we found a large fragment from the top of some pillar, which by its measurements shows beyond all question that this particular pillar was really of greater diameter than the rest. There are, therefore, very real and even excellent reasons for interpreting the platforms as mere foundations, each supporting seemingly two specially thick and heavy columns, one at either end. The length, again, would just permit of this, and the width would also seem appropriate. But if the arguments in favour of the theory are strong, those against it are hardly less convincing. In the first place, what was the purpose of these projecting upright posts? Had they been flush with the tops of the platforms, we could have recognized them as merely strengthening supports to the whole to prevent the piles of logs from spreading beneath the pressure of the pillars. But why did they project? And what then becomes of the posts, which do not touch the platforms, and which in consequence cannot conceivably have served to strengthen them? Why, furthermore, were all these posts so deeply sunk, and what of the square holes in vertical lines along the sides of the platforms themselves? In short, everything which is an indication that the platforms stood free is an argument against their application as foundations, for as such they must have been concealed. The strongest argument of all, though, lies in their position and mutual relationship, and in a further detail to be noted later. If five of them are in line with established rows of columns, two of them at least are as certainly not in such alignment, nor does the position of these two irregular examples seem capable of explanation as a mere studied and intentional variation in the plan, as one of the two lies close beside another of the seven. The other, moreover, presents a very special

difficulty in that it is not one solid mass like the others, but, although originally built, so far as one can see, of thirty feet logs like all the rest, its western face has been cut through vertically in a wide semicircle, which divides the one platform into two most curious ends, outwardly rectangular, but towards the centre being so curved as to form two complementary segments or quarters of a single circle. A reference to the plan (Pl. XLII) will probably be necessary before my meaning becomes clear. Nor is this all. Between the western edge of this divided platform and the eastern edge of the platform nearest to it on the west (which happens to be one of the pair of twin platforms first discovered) there occurs, at the level of the ground from which the platforms rise, a shallow, circular brick-lined pit, whose bricks are supported on a circular collar of wood some 3 feet below its own edge. The eastern edge of this round pit just touches a line drawn down the western edge of the severed platform, or would have touched the platform itself had the semicircle not been cut out in it. What is still more curious, the centre of the pit appears to be the centre of the semicircle formed by the inner faces of the two ends of the divided platform ; while at the same time the pit is placed equidistant from two free standing posts which rise north and south of itself and midway between this platform and its neighbour on the west. Now, when this pit was first discovered, it seemed easy to assume that it was the base of a small well sunk in Gupta times or later, and that perhaps the well-diggers, having struck the western edge of this now divided platform, had cut it out by way of a little archæological exploration of their own. The smallness of the bricks lining the pit (they measure 11″×10″×2″) would seem in harmony with this view, as I personally know of no such small bricks anywhere in Mauryan use. But at the outset it seemed curious, if this had been a well, that we had not passed the débris of its upper portion as we descended through the upper strata at this point. In certain other cases of mediæval and modern wells such débris was invariably met, but here there had been no bricks at all until the slightly damaged edge of the shallow pit was reached. This made the later date for the pit seem open to question, and when Babu Hari Das pointed out that the narrow projecting ledge—it is not more than an inch wide—which is traceable a few inches above the ground on all sides of the various platforms, was also continued at the same level across the curving faces of both ends of the divided platform, it became necessary to abandon the idea of a later date for the pit, and of an accidental origin for the semicircular cutting in the platform. Indeed the whole arrangement of this circular opening with the pit so mathematically disposed at its centre and the two upright posts at equal distances to north and south would seem to preclude the possibility of accident any way. There must be definite design behind it all, and the whole must have had some definite purpose, quite distinct from the idea of mere foundations.

What this purpose may have been I have no means of knowing. The platforms may have been conceivably altars, and the pit a receptacle for the blood of the offerings. But I can find no ancient parallels in support of this idea, and the idea itself is of course incompatible with the supposedly Buddhist character of the site. It is not impossible, however, that the platforms, which seem to rise from a level some feet lower than the floor of the building, are themselves older than

the pillared hall, but I cannot bring myself to believe that this is probable. For the present therefore I prefer to suspend judgment altogether, and to refrain from advancing any reasoned theory regarding these wonderful structures until further excavation reveals more clearly the actual extent of the hall and the relation of these wooden platforms to it. All that can be affirmed now without fear of error is that they constitute one of the most impressive and remarkable discoveries yet made by the Archæological Department in India. There is a real solemnity about them, and as one stands on the high edge of our excavation and looks down upon their mute mysterious forms those twenty feet and more below, one gathers a clearer impression of the great antiquity of the site, and of the magnitude of the monument we are tracing than at any other point of the excavations.

In order to set at rest the dangerous rumour which credited these platforms as being treasure chests, and incidentally to make sure that they really did not conceal anything of value, intrinsic or otherwise, I felt compelled to open one and explore its interior thoroughly. First of all a tunnel was passed under the one selected for examination, lest perchance some central subterranean chamber lay concealed. This proved not to be the case. Then the several logs were carefully numbered, marked on a plan, and one by one removed, until three-quarters of the whole had been taken up, and an excavation of the ground underneath made possible. No cavity of any kind appeared anywhere. The platform was found to be merely a solid accumulation of logs. But the neatness and accuracy with which it had been put together, as well as the marvellous preservation of the ancient wood, whose edges were so perfect that the very lines of jointure were indistinguishable, evoked the admiration of all who witnessed the experiment. The whole was built up with a precision and a reasoned care that could not possibly be excelled to-day, and which I fancy is only rarely, if ever, equalled in India. The vertical piles of logs were most neatly stepped, each underlying log being advanced an inch or two beyond the one above it, and each horizontal layer was bound together by accurately dressed planks of wood on which the several logs of the layer were threaded. To insure greater strength still, the outer log of the layer which rested on the ground was pegged down into the earth by upright pegs fully three feet in length; and the whole pile was again still further bound together by the upright posts along the sides, between which and the actual sides of the platform a certain amount of wooden packing appears to have been introduced for greater firmness. In short, the construction was the absolute perfection of such work, and those of us who had the privilege of observing it were taught a salutary lesson in regard to the often boasted superiority of our own times. The builders who erected those platforms would find little indeed to learn in the field of their own art, could they return to earth to-day. Though, why such pains were taken to ensure the maximum of strength and solidity in the platforms, unless they were really designed to support some enormous weight, is not at all apparent.

I may add, although I trust it is unnecessary, that the logs we were obliged to move were all replaced in position with scrupulous care, and the platform restored to its original condition so far as this was possible. We were, however,

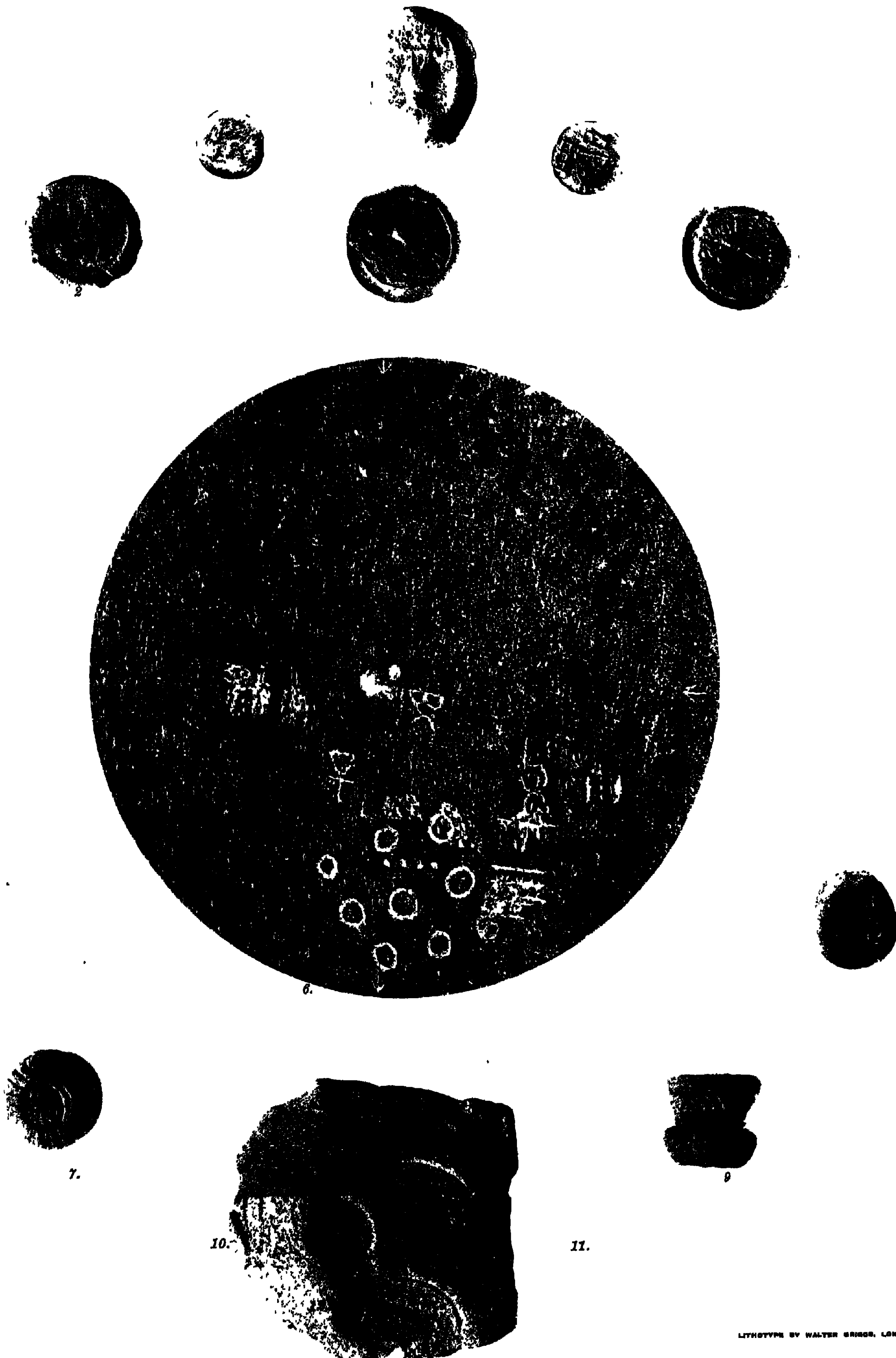
unable to prevent the serious weathering of the surface of the individual logs when exposed to the fury of the May sun, and to my regret I must record, as I believe Flinders Petrie has had to do in Egypt, that in the two days the timbers lay exposed they suffered more disintegration and decay than the previous two thousand years had wrought. We left them encased in earth as the greatest measure of protection we could afford them, but unless they can be completely reburied, their disappearance within a few brief years is lamentably certain.

The minor finds of the season which call for individual mention and discussion here are few in number (Pl. XLIX). They are, however, not unsatisfactory as indications of the variety and quality of the sculptural and epigraphic material which they show must have existed here, and of which it is reasonable to hope that we shall yet recover more generous specimens, as the work goes on. They are of unmistakably Buddhist character, and prove that from the time of Aśoka down through the centuries of Gupta rule the site was the centre of continuous occupation. The dignity and importance of the place in Mauryan times are sufficiently evident from the extent and magnitude of the building, and although we have next to no minor finds assignable with certainty to this early age, one little fragment of sandstone polished on both sides and with one face decorated with very narrow flutings all exquisitely polished, is alone enough to indicate the quality of the subsidiary decorative work which existed here in Piyadasi's time. The beautiful *triratna* slab is also evidence of a similarly high stage of artistic culture here during probably the Śuṅga period, while the continuation of the same nobility of sentiment into the early Christian centuries is indicated by the very promising fragment we have of a large Bodhisattva image, which can only have been produced by the famous school of sculpture which flourished at Mathurā—a find which is particularly interesting so far east as Pāṭaliputra. Certain fragments of small polished and unpolished railing stones may perhaps be remnants of the external decoration of the superstructure, for in some of the early cave temples we see small rails utilized in this position, and the fragments have come from the edges of the two tanks north and south which may well have been originally the courtyards on either side of the main structure. But it is not certain that all our railing fragments are of equal age. One or two of our terracotta figurines are of early date, but whether Mauryan or Śuṅga cannot be readily determined, and one or two of our clay sealings are equally old. But the majority of such minor finds as the season has produced are assignable with certainty to Gupta times. There is, however, nothing which can be referred with confidence to any period between the Guptas and the Muhammadans, and from this the conclusion seems easy that, although the fame of the site was preserved into the Gupta period and occupation was accordingly continued, something then happened to deprive the spot of favour, with the result that it was abandoned until the incoming of the Moslems at a period so remote that the mediæval dislike of the site had been in part forgotten. I say "in part" because even the Muhammadans do not appear to have made any extensive occupation of the site even then, and the evidences for them at all are limited to a few stray walls of no importanceand to a certain number of fairly modern coins. It seems as though the place had fallen

into definite ill repute after the departure of the Gupta people and had been deliberately shunned throughout the subsequent centuries. May we not find the explanation of this fact, if fact it is, in the peculiar ruin which overtook the Gupta buildings? It is clear enough that many of their walls were drawn downwards on the subsidence of the upright columns underneath, and this, to the Guptas mysterious dropping away of the very foundations of things may very well have been not only a mystery but a shock to them. Various localities in the world's history have acquired an evil fame for less real cause than this, and it would be by no means strange if superstitious fears had intervened to render the site taboo for future ages. But whatever the cause, the effect is clear enough. The site was not occupied in later mediæval times, and the excavator is therefore saved the passage of the usual surface accumulations which are so frequently a source of mere annoyance and delay at other places.

In the field of Epigraphy, apart from the inscribed seals we have recovered, the only find of interest is a small fragment which I judge formed part of the expected inscription underneath the wheel of the Law on the *triratna* slab. The fragment measures only $4\frac{1}{2}'' \times 3'' \times 2,''$ and shows only three full *aksharas* with traces of the bottoms of other *aksharas* in the otherwise missing line above. The three existing letters of course do not admit of any definite interpretation, but by an accident they happen to be of quite exceptional epigraphical interest. The very peculiar script current in the far north-west of India and known to students of palæography as Kharōshṭhī is so altogether un-Indian in origin and appearance as well as in the reversed manner of its reading, that a possibility of confusing it with any purely Indian form of writing can hardly have occurred to any epigraphist. But the three *aksharas* of the present fragment, owing to the damaged surface of the stone, do make this confusion or doubt not only possible but inevitable. My own familiarity with the remains of the Afghān Frontier led me to exclaim when the stone was first laid before me, "Why, the inscription is in Kharōshṭhī!" and I read it without hesitation from the right-hand side as the Kharōshṭhī letters *gra-sa-da*. It seemed so impossible, however, that Kharōshṭhī could occur in Pāṭaliputra, that I looked again, and with less confidence read the three as Brāhmī *va-da 6*, the last being a numeral. Geographical considerations aside, it seems really open to question whether the letters are Brāhmī or Kharōshṭhī, but an examination of the fragmentary upper line may help to determine the point. The base of one may be of a Brāhmī *akshara*, as perhaps no letter in Kharōshṭhī could have left the form we trace with certainty. The inscription is probably Brāhmī, as was to be expected. But scholars will acknowledge that the possibility of doubt on such a point renders the fragment of quite peculiar value. It is probably unique in this regard among Indian epigraphs. Its date, I may add, is not certain. If the base of the missing *akshara* above is the base of a *ba*, the epigraph may be of Mauryan date; if it represents a *pa*, the date cannot be earlier than Śuṅga times, say the second century before our era. It is of course very earnestly to be hoped that the remainder of this inscription will ultimately be discovered. It would probably shed a flood of light on the nature, if not on the actual identity, of the pillared hall.

TATA EXCAVATIONS AT PATALIPUTRA.



LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

1-18. KUMRAHAR: MINOR ANTIQUITIES.

The register of seals recovered at Kumrahar shows 20 entries, including 9 matrices, which is a most unusual percentage. A complete list of them is given in Appendix A to this paper. They range in date over a period of eight or nine centuries, and testify to the long occupation of the site. Among the matrices No. 18 is of special interest because of its extreme primitiveness. It comes from a depth of 18 feet, and shows no written characters, only a trio of very archaic symbols. Its lack of a legend lessens its historical importance, but nevertheless it is an interesting document for the as yet unwritten history of Indian gems and signets. It may confidently be assigned to at latest the 3rd century B.C. I may also call attention to seal No. 2, with the legend *Gōpālasa*, "(seal of) Gōpāla." Both the use of the Prākṛit form and the formation of the individual *aksharas* lead to its reference with confidence to the time of the Śuṅga kings or their immediate successors. The point of special interest in regard to it, however, is its resemblance in size and shape to the type of seal which became so popular at a later age and which bears such a curious resemblance to the modern departmental seals of the Government of India. It is perhaps the earliest example known of this particular type of seal. The majority of the season's yield, though, are of Gupta date and call for no individual mention here. Full particulars of them all will be found in Appendix A. It remains for me, therefore, merely to express my indebtedness to Mr. R. D. Banerjee for the substantial help he has rendered me in fixing the readings of the legends. My own hands were too full to permit of my devoting the necessary amount of time to a consideration of those of the number which are obscure.

A complete list of the coins found at Kumrahar, is given in Appendix B. It will be seen that they number 69 in all, and range from the time of the early punch-marked and primitive cast coins to that of Shāh 'Ālam bādshāh, but with a wide gap between the Guptas and the Moslems. Among the earlier coins I may mention specially No. 21. This is a large thin round copper coin in very poor condition which is believed to be a unique form of the coinage of Kosām in the 2nd century B.C. Certain coins of the Mitra dynasty also occur (cf. Nos. 10, 19, 29), the best specimen being one of Indramitra, No. 19. Even Kanishka is represented by two copper coins of the Vāyu type (Nos. 1 and 28, from the surprising depths of 2′ 5″ and 3′ respectively). Anonymous tribal coins of the "Elephant and chaitya" type are fairly common. But curiously enough only one Gupta king is represented, namely, Chandragupta II Vikramāditya (375-413 A.D.). Of his rare copper coinage we have two duplicate specimens, Nos. 23 and 57, from depths of 2′ and 10′ 6″ respectively. As a rule the copper coins of this monarch are both few and poor, which renders our specimens of special value, as both are extraordinarily well preserved, particularly as regards the legend.

The comparative paucity of these minor finds is not readily explained. We certainly had expected more, both in the field of sculpture and in that of epigraphy. But such as we have, they are very definitely encouraging. It is abundantly clear that the site was occupied for centuries, and was richly adorned with sculpture and other decorative material, some of which was inscribed. It is impossible that all of this can have been removed, and certain that it did not sink or suffer decay. It

therefore must be there, and the only reason why we have not yet found it must be because we have not yet reached the proper part of the site. This is indeed highly probable on other grounds as well, for by far the major portion of our excavation is still everywhere within the building. If, as seems an inevitable conclusion, the pillars had no stone capitals (for we must certainly have found some trace of them had there ever been any, the more so, since they must have been broken by the same force which broke the columns and thus rendered impossible of use elsewhere), then the main decoration of the building must have centred on its exterior. When at length we can determine its extent and orientation, and can make adequate excavations along the line of its façade, there is every reason to anticipate that the yield of Museum material will be ample. For the present we can only wait in patience for this time to come, relying with reasonable confidence upon the rich and certain promise for the future which the first fruits of the season contain within themselves.

It is of course too early yet to hazard any judgement as to the identity of the pillared hall itself, or even as regards the general nature of the building. It may have been the Hall of Conference of an exceptionally vast and important monastery; it may have been a Hall of Audience, or even the Throne-room, of the Mauryan palace. One can only guess at this stage of the excavation, and guesses are unprofitable. But it is worthy of consideration, even now, that the ground plan of the building, so far as this has been ascertained, is singularly unlike that of any other ancient structure known in India. Sir John Marshall, I understand, discovered at Sāñchī some time in January 1913 an apsidal chaitya hall of Mauryan date. With this exception the hall at Kumrahar is believed to be the first structural edifice of so early a period yet found (apart, of course, from *stūpas*, which have no bearing on the point in question). It would be unwise, therefore, where the documents are so few, to dogmatize unduly, or to over-emphasize the exceptional nature of the Kumrahar hall. Such pillared halls may perhaps have been common after all. If this was the case, though, it is strange that more evidences for them are not available, at least for the following centuries. In these circumstances it may be significant that for the nearest parallel in ancient times one has to turn again to Persepolis. The well known "halls of a thousand columns" in the Dravidian temples of South India are so much later as hardly to come into consideration, and nowhere in ancient India is anything of this nature known. But at Persepolis, in the Hall of a Hundred Columns, we do find something not altogether unlike the Kumrahar hall so far as we can as yet trace the latter, and when Aśokan capitals, and the very masons' marks on Aśokan columns seem so clearly to go back to Persepolis, it is by no means impossible that a close connection existed in the matter of the ground plan also. This would indicate a greater debt on India's part to Persepolitan civilization than has hitherto been evidenced, and, if it can be established in the future course of the excavations, it will mean a considerable increase in our knowledge and perhaps involve a certain modification of existing theories. But it would be premature to claim that the point has been actually proved.

In any case, the importance of the monument is sufficiently apparent, and whether it is of purely Persepolitan origin or not, we may legitimately refer to the famous Hall of a Hundred Columns at Persepolis for purposes of comparison.

Dieulafoy calls the latter (*Op. cit.* Part II, p. 20, footnote) " le plus vaste et le plus beau de ceux qu'élevérent les princes achéménides sur le soubassement de Persepolis," and we may be sure that equal admiration would have been aroused in the beholder of our stately hall, had it only not suffered such utter and deplorable decay. The limitless dignity of such a structure is not unworthily shown by Dieulafoy's Plate IX of Part III, where he attempts to picture the interior of the Persepolitan palace restored. It was evidently not without reason that the early Greek ambassadors compared the royal monuments of Pāṭaliputra to those of Ecbatana and Susa. A reference to the plate in Dieulafoy enables one to realize more adequately what an architectural and artistic tragedy relentless Time has compassed at Kumrahar.

D. B. SPOONER.

APPENDIX A.

List of seals found at Kumrahar.

No. 1.

Area oval, ¾" by ⅝"; the field is divided lengthwise into two halves, the device being a central *triśūla* with subscript wheel, flanked on the left by a smaller *śaṅkha* and on the right by a corresponding *swastika*. Legend in Gupta characters *Chatrasya* = (seal of) Chatra.

Found at R[s]. 19 c^2, 3 feet 4 inches deep.

No. 2.

This is not a true seal in the ordinary sense, but an irregular fragment of terracotta, perhaps a potsherd, showing three fairly complete and two more fragmentary impressions of a seal to be called 2 A, and one complete impression of the different seal recorded as 2 B.

Seal 2 A.—Area oval, 1⅛" by ¾"; device a *śaṅkha* in outline situated in the centre of the field, with four smaller symbols in the four corners, *viz.*: upper left, ?; upper right, *triśūla* and wheel; lower left, ?; lower right, *swastika*. Legend in four aksharas of C. 1st century B.C. disposed one in the centre of each side, beginning on the left, *Gōpālasa* = "(seal of) Gōpāla." Note that the form is Prakrit.

Seal 2 B.—Area circular, diameter ⅝"; device a large triangular symbol or letter; no legend.

Found in P21 d^4, 3 feet deep.

No. 3.

Area circular, diameter 1"; device in centre of upper half uncertain; underneath are two parallel horizontal lines with ends upturned. Legend in Gupta characters in lower field, (?) *Savarasya* = (seal of) Savara (?).

Found in T 17 b^2, 4 feet 6 inches deep.

No. 4.

Small clay button, area circular, diam. ⅜"; legend in minute characters seemingly arranged in three lines; now wholly illegible.

Found in J 20 d^1, 3 feet 6 inches deep.

No. 5.

Round, flat, terracotta matrix; area circular, diameter ½"; no device: *aksharas* of the legend negative, and of the 3rd century B.C. Legend (read by Mr. R. D. Banerjee) *silakasa* = (seal of) Silaka. An exceptionally ancient and primitive seal.

Found in T 22 d^4, 5 feet 6 inches deep.

No. 6.

Matrix of black clay; area circular, diameter ¾"; device humped bull to left; legend lost.

Found in J 15 a^4, 3 feet deep.

No. 7.

Area circular, diameter ⅜"; device, Dr. Bloch's "decorated wheel," with small round bosses to right and left, and two thick parallel horizontal lines below. Legend in Gupta characters, illegible.

Found in Q 17 a^1, 2 feet deep.

No. 8.

Large clay button; area circular, diameter ⅞"; device humped bull to left, with long horizontal line below. Legend, in Gupta characters, *Dharmmapr(i)yasya*.

Found in I 17 a^8, 8 feet 3 inches deep.

No. 9.

Matrix in form of a high pointed cone; area of face circular, diameter 1″; neither device nor legend traceable. [NOTE.—The character of this object is uncertain.]

Found in O 25 d^1, 6 feet 2 inches deep.

No. 10.

Matrix of same type as No. 9. Illegible. Area circular, diameter ¾″.

Found in S 26 b^1, 8 feet 6 inches deep.

No. 11.

Matrix of decorative form, pierced for suspension. The face shows a circular area, diameter 1″, with small central depression, but no trace remains of either device or legend.

Found in T 26 c^1, 4 feet 3 inches deep.

No. 12.

Matrix of clay pinched into a rough cone; area of face a rough circle, diameter ¾″; no device; legend in early characters in three lines.

Found in Q 26 a^3, 7 feet deep.

1. *Dighavata* .
2. *Palama* .
3. *Sa* (*ṁ*) *ghasa* .

} "of the Palama—congregation of Dighavata (Dirghavata)."

No. 13.

Fragmentary duplicate of seal No. 1 q. v.

Found in P 25 b^3, 7 feet deep.

No. 14.

Area narrow oval, ⅞″ × ½″; device, a standing human figure facing; right hand extended, left on hip; one short thick line underneath; no legend visible.

Found in Q 24 a^3, 8 feet 2 inches deep.

No. 15.

Area oval, 1″ by ¾″; device large standing bull, facing; one short thick horizontal line underneath; legend in four Gupta *aksharas* (one missing) *Shashthidasa* " (Seal of) Shashṭhidāsa."

Found in P 24 c^3, 9 feet 3 inches deep.

No. 16.

Matrix of red terracotta in the shape of a truncated cone, with incised shoulders. Area of face circular, diameter ⅞″; field is divided into four equal parts by two lines crossing at right angles. There is no device. The legend has not been read.

Found in O 24 c^4, 9 feet deep.

No. 17.

Matrix similar in form to No. 16. Area of face a rough circle, diameter ⅞″; there is no definite device; only rough lines in centre; the legend is faintly traced around the edge, and has not been read.

Found in N 23 b^4, depth unknown.

No. 18.

Matrix in shape a high cylinder of small diameter, with flaring base. Area of face circular, diameter ⅝″; device a three-arched chaitya with surmounting crescent, a taurine lying on its side

underneath the chaitya, and a long very narrow upright rectangle in the right field, divided into three equal parts by two short cross lines. There is no legend. The type is extremely primitive, and the matrix may be referred with confidence to the 3rd century B.C. at latest.

Found in I 23 d^4, 18 feet deep.

No. 19.

Not a true seal, but an irregular piece of clay with the *aksharas : ma-pu-tra-sya-vi* . . . [or *vā*].

Found in O 23 d^2, 5 feet 3 inches deep.

No 20.

A similar fragment, reading *ghu-ra-ṭē-ra* . . .

Found in O 23 d^2, 6 feet 3 inches deep.

APPENDIX B.

List of Coins found at Pāṭaliputra, Site No. 1, Season 1912-13.

No.	Find-spot.	Depth.	Metal.	Description.
1	N 17d⁴	2′ 5″	Æ	Kanishka (Vāyu type).
2	P 24a⁴	1′ 9″	Æ	A large circular coin of Shāh 'Ālam.
3	O 20b⁴	1′ 6″	Æ	Circular, heavy, apparently modern (requires further cleaning).
4	R 21c⁴	2′	Æ	Irregular oblong, defaced.
5	P 25b⁴	3′	Æ	Large, square, *early rectangular cast*.
6	T 22b¹	3′	Æ	A small round coin of *Mitra* type, in very poor condition.
7	J 19c³	4′	Æ	Circular, cast, *elephant* and *chaitya* type, good condition.
8	V 19c³	3′	Æ	Small, square, poor condition; apparently *early rectangular cast*.
9	Q 21b²	8′	Æ	Circular, cast, *elephant* and *chaitya* type, very good specimen.
10	H 18d⁴	2′ 6″	Æ	Circular, in very poor condition: apparently a *Mitra* coin.
11	T 17c²	5′	Æ	Oblong, copper in very poor condition, perhaps punch-marked.
12	H 17b²	2′ 4″	Æ	Square, punch-marked; sun and taurine visible.
13	R 17c³	5′ 8″	Æ	Irregular square, unrecognizable.
14	P 17d⁴	5′	Æ	Small square punch-marked, only solar symbol recognizable.
15	T 20c²	2′	Æ	Large, circular coin of Shāh 'Ālam.
16	I 17b³	5′	Æ	Rectangular, punch-marked.
17	T 20c¹	2′ 3″	Æ	Rectangular punch-marked, taurine visible, and cruciform outline.
18	I 17b⁴	5′	Æ	Oblong, unrecognizable; perhaps punch-marked.

No	Find-spot.	Depth.	Metal.	Description.
19	I 17a4	6′	Æ	Coin of *Indramitra*,—in fair condition.
20	I 20a4	4′ 6″	Æ	*Elephant* and *chaitya* coin.
21	M 16d2	5′	Æ	Large, circular thin, coin, type Kosam, c 200 B.C. Fragile.
22	O 24a2	6′	Æ	Much corroded, oblong; perhaps a copper punch-marked.
23	R 17d1	2′	Æ	Chandragupta II Vikramāditya. Good specimen.
24	Q 23a2	3′	Æ	Large, square, punch-marked, symbols on both sides, including sun and taurine
25	Q 17b2	5′	Æ	Square, much corroded, unrecognizable.
26	S 18b2	4′	Æ	Modern Muhammadan
27	S 19a3	3′	Æ	Round, Muhammadan (Pathan Kings?)
28	R 22c2	3′	Æ	Large, round, Kushān coin, apparently Kanishka.
29	O 26c1	8′	Æ	Large, round, *Mitra* coin, in poor condition.
30	S 19a3	3′	Æ	Long, narrow, rectangular; no marks visible.
31	R 22c2	3′	Æ	Heavy, circular, unrecognizable, but possibly Kushān.
32	M 15d3	4′	Æ	Shāh 'Ālam
33	S 23b3	3′ 6″	Æ	Shāh 'Ālam.
34	K 15a2	4′	Æ	Heavy, round, modern.
35	S 22a2	5′	Æ	Modern Muhammadan.
36	Q 15a2	?	AR	Seven silver punch-marked coins, six square, one round.
37	R 21c3	1′	Æ	A square, cast coin, in very poor condition.
38	R 24d4	2′	Æ	Heavy irregular circle (perhaps Akbar?).
39	S 21c2	6′	Æ	Fragment, unrecognizable, of a rectangular coin.
40	S 29c3	3′ 6″	Æ	Thin, circular, primitive, cast; *rev.* tree within railing, *obv* "Ujjain" symbol, elephant, etc.
41	O 18a1	9′	Æ	*Elephant* and *chaitya* coin, in poor condition.
42	P 17a1	7′	Æ	A broken and unrecognizable fragment of a rectangular coin.
43	U 27a4	6′	Æ	Originally square, broken, unrecognizable.
44	H 26c3	5′	Æ	Long narrow piece of irregular copper, perhaps not a coin at all.
45	P 25b2	1′ 6″	Æ	Shāh 'Ālam.
46	O 28b2	2′ 9″	Æ	Thin, circular, primitive, cast; tree on *obv.*, *rev.* elephant, etc.
47	U 24a1	Surface	Æ	Unrecognizable.

No	Find-spot.	Depth.	Metal.	Description.
48	T 21c[1]	6′	Æ	Square, copper, unrecognizable.
49	Q 20c[2]	2′	Æ	Modern Muhammadan.
50	U 23c[4]	2′ 4″	Æ	Thin, square, probably punch-marked.
51	U 25b[2]	2″	Æ	Unrecognizable fragment, doubtfully a coin.
52	U 22a[3]	2′ 6″	Æ	Modern Muhammadan.
53	Q 25b[3]	14′	Æ	Very large, heavy, square punch-marked coin, symbols on both sides (sun, etc.).
54	O 23d[2]	4′ 6″	Æ	*Elephant* and *Chaitya* coin.
55	T 25a[1]	3′	Æ	Thin, round, coin, Chandragupta II Vikramāditya (?).
56	S 24b[2]	4′	Æ	Irregular, thin, oblong fragment (perhaps not a coin at all).
57	Q 25b[4]	10′ 6″	Æ	Chandragupta II Vikramāditya.
58	Q 23c[4]	10′ 2″	Æ	Heavy, thick, round, unidentified.
59	S 29d[1]	4′ 6″	Æ	Ditto.
60	Q 15b[3]	6′	Æ	Large thin circular coin of primitive type (cast) *obv.* tree, wheel, etc , *rev.* " Ujjain " symbol, animal, etc.
61	S 28b[1]	6′ 6″	Æ	Early rectangular cast, in poor condition.
62	O 26c[1]	6′ 2″	Æ	Oblong punch-marked coin.
63	Spoil earth.		Æ	Early, rectangular, cast.
64	I 23d[3]	3′	Æ	Large coin of Shāh 'Ālam.
65	I 24b[2]	4′ 8″	Æ	Early, rectangular, cast.
66	S 25b[1]	2′	Æ	Shāh 'Ālam.
67	S 25d[3]	2′	Æ	Modern.
68	T 25d[2]	?	Æ	Modern Nepalese (a suspicious coin purporting to come from 15 feet deep; probably introduced by cooly).
69	S 25d[3]	2′	Æ	Modern.

PICTORIAL REPRESENTATIONS OF JĀTAKAS IN BURMA.

THE excavations in 1907, at the Western Petleik, Pagan, brought to light a large number of terracotta reliefs illustrative of the Jātakas.[1] Quite close to the east of it is its sister pagoda, locally known as the "Elder Sister," owing to the fact that it was probably built first, but known officially as the Eastern Petleik. Its close proximity to the first one, with which it is identical in design and structure, naturally led to the hope that it, also, might contain plaques similar to those found at the Western Petleik ; and these expectations were not disappointed, for, on excavating round its base, where lay the *débris* of the roof of the vaulted corridors, 171 entire plaques were recovered, as well as 178 fragments. These terracotta reliefs are in all particulars similar to those previously found at the sister pagoda, and superior in finish and execution to all others found at Pagan and elsewhere in Upper Burma. This points to the fact that they were made by the same artists and that no great length of time, therefore, intervened between the building of the two pagodas. The exact age of these two pagodas cannot be ascertained with any degree of certainty, owing to the fact that, contrary to what is the case with the other monuments at Pagan, no mention whatever of them is made in the Burmese chronicles and in the inscriptions. But several considerations lead me to think that it is not earlier than the middle of the 11th century. Burmese tradition, corroborated by epigraphical evidence, affirms that, previous to the 11th century, the Siṇhalese form of Southern Buddhism did not exist at Pagan ; the chronicles express this in pithy and drastic words: "before king Anoratha Buddhism *was not known* at Pagan[2]"; by "Buddhism" they understand and mean solely the Siṇhalese form of Hīnayānism, introduced into Pagan in 1057 A.D., after the conquest of the Mon country which had received it in the 5th century A.D.; they affirm that, previous to this date, the religion of the *Arī*[3] and nāga worship were paramount in the

[1] For the reproduction of some of these see *A. S. R.*, 1906-07, Pls. XLII—L.

[2] Mahārājavaṅ-do-Krī, 1,269 ; Sasanālaṅkāra-Cātan 87 *f* ; 90 *ff* ; Pagan Vanthokman Rajavaṅ, 38, 39 ; Paganvaṁsajālinīkyam, 75, 76, 88 ; Paganrājāvaṅ-sac, 109-10 *ff* ; Arī-krī-atthuppatti, 15, 16. See also my review on J. Stuart's *Burma through the centuries*, in the *Journal of the Burma Research Society*, Vol. I, part I, pp. 122-131, where more references are given.

[3] See references given in Note 2 ; also "*Un nouveau document sur le bounddhisme birman*" par L. Finot, *J. A.*, Juillet-Août, 1912, 121 *ff*, and my *Provincial Report* for 1912-13, para. 46, p. 18.

land. Such a statement cannot be rejected lightly; it is well known how prone Indo-Chinese nations are to ascribe a hoary antiquity to the introduction of Buddhism into their land, generally pushing it back to the time of Aśoka and not seldom to the very lifetime of the Master himself. This Burmese tradition, therefore, which is directly opposed to current ideas regarding the remote antiquity of the establishment of the present form of Buddhism in *Burma proper*, and at variance also with national vanity and pride, is but a statement of fact and strongly corroborates the epigraphical evidence furnished by votive tablets. The latter point to north-eastern and northern Indian influence, as well as Mahāyānism and, perhaps, a form of Hīnayānism not Siṇhalese, but having its Canon written in Sanskrit; and testimony of a similar kind is also supplied by the architectural style of the temples.[1] Now, it is well known that the collection of tales commonly designated "the Jātakas"[2] was compiled in Pāli and put into its present form in Ceylon, during the 5th century A.D. by the Buddhaghosa School; thence it passed over to Thaton, and after the fall of this city, to Pagan, the Burmese capital. There is no evidence whatsoever to show that the art of making terracotta reliefs representing Jātakas, whether glazed or not, was known at Pagan before the, for the Burmese, eventful year 1057 A.D.[3] The plaques at the two Petleik pagodas not only are illustrations of the Jātakas, but follow rigorously the order and numbers of the Siṇhalese recension and therefore of Fausböll's edition, which is based mainly on Siṇhalese manuscripts. As, from the avowal of the Burmese themselves, Southern Siṇhalese Buddhism was not known at Pagan before that year, and as the Jātakas as illustrated at Petleik follow the Siṇhalese collection which had already been known for several centuries to the Talaings, it is not unreasonable to infer that the art of making these reliefs was brought over from the Talaing country together with Talaing captives.[4] This inference is further strengthened by the fact, recorded

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[1] See *Report of the Superintendent, Archæological Survey, Burma*, 1912-13, para. 44, p. 17; L. de Beylié's *L'architecture Hindoue d'Extrême-Orient*, ch. IV, and principally its conclusion, p. 325; also my appendix to it, *Précis de l'histoire de Pagan*, p. 396 *ff*; Fergusson's *History of Indian and Eastern Architecture*, Vol. II, Book VIII, p. 339 *ff*; *B. E. F. E. O.*,-1911, p. 2; *Indian Pandits in the Land of Snow*, 51; A. Schiefner's *Taranatha's geschichte des Buddhismus in Indien*, pp. 72, 147, 255, 267; Taw Sein Ko, *Some Remarks on the Kalyani Inscriptions*, 12 *ff*.

[2] The Jātaka together with its Commentary, 6 vols., and its Cambridge translation under the editorship of E. B. Cowell; a new German translation is being brought out by Dr. J. Dutoit, and is, in many places, more reliable than the Cambridge one. Burmese editions and translations are numerous

[3] Eventful in that the Burmese, victorious in the field, were intellectually the conquered; for it is from that period that the wonderful architectural and literary activity, which made Pagan for a time the Buddhist metropolis of Indo-China, is to be dated. Nearly three centuries of Northern and North-Eastern Indian active influences had slowly prepared the Burmese thoroughly to assimilate the Talaing civilization introduced by King Anoratha's conquest; from that time writing was adapted to common use by the adoption of a foreign alphabet to represent Burmese sounds, and inscriptions on stone or brick, in Talaing and Burmese, appeared at Pagan; the Tipiṭakas are transliterated into the newly adopted alphabet. Sanskrit is definitely abandoned as a vehicle of religious teaching and, with it, the form of Mahāyānism then extant at the Burmese capital, and superseded by Pāli; the court and the people receive the teaching of Hīnayānism at the feet of Talaing monks, and under Indian and Talaing supervision the most magnificent temples are built in rapid succession. It is remarkable that, as yet, no stone inscriptions in Talaing, Burmese or Pāli have been found *at Pagan* antedating the year 1057 A.D., though to an earlier date belong some terracotta votive tablets with a short Sanskrit inscription, generally the stanza "*Ye dharmmā hetu prabhavā*" in North Indian letters and in every particular similar to those of Buddha Gayā; the question whether these votive tablets with Sanskrit on them were made at Pagan or imported by pilgrims, is as yet a moot point; but there is no doubt—for some moulds have been found and are now in the Pagan Museum—that those with Pāli inscriptions were manufactured on the spot.

[4] The "Thagyā-phaya" (Cakra-phūrā) Pagoda at Thaton, which is said to have been built under orders of King Anoratha when he took that city, was, up to a few years ago, adorned with beautiful glazed terracotta reliefs; so, too, the Shwegugyi near Pegu, in the heart of the Talaing country.

in both the Talaing and Burmese chronicles,[1] that i ng Anoratha, besides the Pāli Canon and its commentaries and a large number of learned monks, carefully chose and brought over to Pagan the best artists and artizans he could find, namely: architects, masons, sculptors in stone and wood, gold and silversmiths, etc., implying thereby that skilful workers did not exist then at the Burmese capital.

The plaques at the Petleik pagodas are inserted and fit exactly in small panels evidently made to receive them on the interior walls of the circumambulatory corridors. This is sufficient to show that the Eastern and Western Petleik pagodas are not earlier than the conquest of the Talaings in 1057, although they may have been among the very earliest that were built after that event. This view is supported by the testimony of votive tablets found in the *débris* among the plaques and bearing the name of king Anoratha; and a fragment of an inscription in the Talaing language which was found at the Western Petleik, and which undoubtedly recorded the foundation of the pagoda, is another proof of its age, which can be placed between A.D. 1057-1059.[2]

As in Ceylon, so in Pagan, the Jātakas rapidly won the heart of the people. The example of the founders of the two Petleik pagodas, whoever they may have been, was not lost upon subsequent builders, and the principal temples in Pagan were ornamented with a complete series of the Pāli Jatakas, 547 in number.[3] As far as I am aware, Pagan is the only place where several series of pictorial representations of the complete collection of the Jātakas were made on terracotta. Seven pagodas were thus ornamented; they are, in the order of the dates of their foundation, the following :—

(1) The Eastern Petleik.

(2) The Western Petleik; founders unknown, but probably Anoratha or Manuha or both, 1057-59.

(3) The Shwesandaw, built by king Anoratha after his return from Śrīkshetra or Old Prome; exact date unknown, but probably contemporary with the two Petleik or built soon after.

(4) The Shwezigon, built by Anoratha in 1059, and enlarged by Kyanzittha (1084-1112).

(5) The Ananda, built by Kyanzit-tha; it is said to have been begun in 1082 and completed in 1090 A.D.

(6) Dhammarājika, built by Narapatisithu (1174-1211); the *hti* was placed on it in 1198 A.D.

(7) Maṅgalacetī, built in 1241 A.D. by Tarukpreman (1255-1286).

Other complete series were made to ornament the terraces of—

(8) The Nandaw-ye, at Myanzainê; near Kyauksê, about 1300 A.D.

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[1] *Talaing Rājavaṅ*, p. 11, and all the Burmese histories.

[2] *A. S. R.*, 1906-07, Pl. L.

[3] This is the number of stories in Fausböll's and in all other editions; the tradition, however, always gives the number as 550; it is an interesting and important fact that the West Petleik numbers its plaques up to 550, thus agreeing with the tradition; the three additional Jātakas at the Petleik are: Velāma-jāt (497), Mahāgovinda-jāt (498) and the Sumedhapaṇḍita-jāt (499). As far as I have been able to ascertain up to now, the other temples follow the usual number 547; further research, however, will show whether they followed the Petleik or not.

(9) The Shwesigon, at Makkhara, between Mandalay and Kyauksê, built by Yazathingyan about 1300 A D.

(10) The Pathodawgyi, at Amarapura, built in 1820 by Bagyidaw (1819-1837).

Thus, the development of this art in Burma proper extends over a period of nearly eight centuries (1057-1820) [1] I have arranged the selections shown in the plates according to the dates of the pagodas in the order given in the above list, so that this development, I ought rather to say decadence, may be traced more easily [2]; and I have given as many representations of the same Jātaka from the different temples as was possible, in order to illustrate the different artistic conceptions of the same story by the several artists through the centuries.

It will be remarked that the reliefs of the Pathodawgyi are the only ones that are thoroughly Burmese in character and conceived according to modern Burmese art. The princely costumes are those of the period (1820), and were still being worn when the British annexed Upper Burma (1885). A comparison between Modern Burmese and Siamese art will show that it is essentially the same. (*Cf.* the illustrations in *Mission pavie : Recherches sur la littérature du Cambodge, du Laos et du Siam.*)

The Plaques.—With the exception of the plaques at Pathodawgyi, which are of white marble with the figures unskilfully painted in green, yellow and black on the white ground of the marble, all the others are in baked earth. The earliest, namely, those from the Petleik and the Shwesandaw differ from the others in two particulars; they are neither glazed nor surrounded by the usual two bands divided by strings of bead ornaments. All the others are covered with a thick layer of green glaze; this was intended as a protection against sun and rain, to which the plaques are exposed, except in the case of the Petleik, in which they are on the interior walls of a roofed corridor. That this precaution was a wise one is exemplified in the case of the Shwesandaw, where, being exposed to the weather and unglazed, they have so badly deteriorated, that it is often almost impossible to make anything of them (*cf.* Pl. LII, *fig.* 13*a*). But, though this layer of glaze served this purpose well, it was generally applied so thickly as to blur, to a great degree, the nicety of the details, and so make the figures appear much rougher and more inartistic than in most cases they must in reality have been. Figure 22 on Plate LIII, from the Pagan Shwezigon, is a good illustration of this; on this plaque, the glaze coating is very thin, and the result is that the perfection of the details in the figures is very much more apparent than in the other plaques. There is no reason to believe that the workmanship of the great majority of the other plaques in the different temples was very much inferior to this particular one; unskilful glazing mostly made all the difference, as a careful examination of the unglazed terracotta of Petleik will show.

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[1] Some plaques were found at the Mingun pagoda, begun in 1790 by Bodawpaya, but never completed; they are about the worst I have seen; brown and white glaze has been applied to them so thickly as almost completely to obliterate all details, and even, in some cases, the legends below. Such as could be recovered have been placed in the Mandalay Palace Museum.

[2] The subject of terracotta plaques and frescoes will be more fully treated in a forthcoming monograph on the two Petleik pagodas, which will include all the bas-reliefs found there.

The Legends.—The legends on the plaques are written in the so-called Pāli characters current at that time in Pagan (1057-1300), and which are found on most of the inscriptions The legends on the plaques of the Pathodawgyi (1820), however, are in the round characters which came into vogue during the reign of Bodawpaya, about a century ago. None of these inscriptions, whatever their age, offers any difficulty in deciphering

These legends may be divided into two sets: 1st, those that are all in Pāli, giving the name of the *jātaka* followed by its number; these are found at both the Petleik, at the Pagan Shwezigon, the Ānanda[1] and the Pathodawgyi. The plaques of the Petleik differ from all others in Pagan, in that the legend is written on the top of and not below the scene represented; this is the case also at the Pathodawgyi. 2nd, those that are both in Pāli and Burmese, as on the plaques of the Dhammarājika, the Mangalacetī, the Nandawye and the Singaing Shwezigon; in the case of the first two pagodas, the Burmese is immediately followed by the number of the *jātaka*; the numbers are missing on most of the plaques of the latter two. The Pāli gives the name of the *jātaka* and the Burmese designates the state of existence in which the Bodhisattva had been reborn in that particular story; for instance: "Baka-jat, Phurhāloṅ ṅā phrac i, 236," that is: Baka-jātaka; the Bodhisattva (phurhāloṅ) is a fish (Pl. LV, *fig*. 29). Sometimes the word phurhāloṅ is omitted, as in Pl. LV, *fig*. 33, "*Cakavāka-jat; vaṁmay 434*"; that is, "Cakkavāka-jātaka; goose"; here it is to be understood that the Bodhisattva was at that time a goose. The form of many of the Burmese words in these legends evidences the important fact that the spelling of most words was far yet from being settled, and that the art of writing *Burmese* was still in its infancy; the people were at that time grappling with the not too easy problem of representing adequately the sounds of their Tibeto-Burman speech with the characters of an Indian alphabet. That they were helped in this by the Talaings, there can be no doubt; Talaing influence may be seen in many forms, such as "*rasiy*"=Sanskrit *ṛṣi*; *seṭṭhiy*=Pāli seṭṭhi; *brāmók*=Sanskrit *pramukha*; the Talaing influence is seen in the initial "*b*"; *bruṁhma*=*brahma*; "*pè-thak-smā*"="*pè-tak-smā*" a steersman, in which expression the word "smā" now "khmā" is a pure Talaing word. One of the very oldest specimens of written *Burmese* is to be found on Pl. LII, fig. 13*a*; this plaque is from the Shwesandaw (1057-59), and is the only one found with an inscription among the few terracotta tablets found at this pagoda; the legend reads: "*Vattaka-jac; phurhāloṅ ṅuṁ amyo*;" "Vaṭṭaka-jātaka; the Bodhisattva (is) a quail king."

Some of the titles of the Jātakas differ slightly as to spelling; a list of such, so far as they are found among the plaques reproduced in this paper, is given below. Others have been given a name altogether different from that in Fausböll's Siṇhalese and Burmese editions; for instance: "*Kosalarāja jātaka*" for "*Dhīgitikosala jātaka*" (Pl. LI, *fig*. 7); "*Poṭṭhapāta jātaka*" for "*Rādha-jātaka*" (Pl. LVII, fig. 44). In the former case "Dhīgiti" has been dropped; in the latter, the artists

[1] The Ananda temple has also 1,472 plaques with inscriptions in Talaing. Those on the lower tier are illustrative of the contest between the Buddha and Māra; those on the upper tiers, about 400 in number, illustrate the Ten Great Jātakas (Mahānipāta, Fausböll, Vol. VI); these latter have all been photographed, and I hope soon to be able to undertake an edition of them. The plaques with Pāli legends are on the middle terraces. *Cf. B. E. F. E. O.*, 1911, p. 1 *ff*.

have called the story (No. 145. i, 495) by this name, because, in it, of the two parrots, the younger Poṭṭhapāda, is the Bodhisattva, whereas in the other (No. 198 ii, 132) it is the elder Rādha, which is the future Buddha. Again, in fig. 57 (Plate LX, No. 7, in the 6th row) we have "*Aggikabhāradvāja-jātaka,*" for "*Aggika-jātaka*"; the longer title is the one generally found in Burmese editions.

Technique.—The words M. A. Foucher wrote summing up the technique of the Boro-Budur bas-reliefs, apply exactly to the terracotta plaques of Burma: "The capital and most apparent defect of these bas-reliefs is the inability always evinced by the artists – notwithstanding all their manual dexterity—to create figures possessed of a characteristic individuality . . . . The fact is manifest. They are capable of representing types, but not individuals. They have one pattern for the king which is also used to represent gods, just as that of the queen is also used for goddesses; one pattern for a monk which, barring the head-dress, represents as well the Buddhas; a pattern for a courtier, an ascetic, a brahman, a warrior, etc. And this one model they use on every occasion."[1] A cursory examination of the plaques will bear out the justice of this remark; the personages are almost in every case the same; all the kings, all the queens, all the ascetics, all common men and women are the same, depicted after one unalterable pattern; the very physiognomy of the divers actors in each is almost identically the same; and, except perhaps in the plaques of the Petleik and of the Pathodawgyi pagodas, the attitudes of the figures are very few, and can probably be reduced to not many more than six or seven.[2] All this makes these bas-reliefs look very stiff and conventional; but this very "conventional and stereotyped character of the Jātaka scenes makes it probable that parallels may some day be traced in India,"[3] at least during the period of Indian mediæval iconography. Indeed, excepting the style of the houses, everything almost in these plaques is Indian, including even the cast of countenance. Influences from Southern, Central and Eastern India are discernible in the dress, more especially of the women, and in the fashion of making up the hair in a chignon falling gracefully low on the shoulder; in the distended earlobes with enormous ear-ornaments[4]; in the armlets, crowns of kings and gods, etc., as a comparison with, for instance, Rajendralal-Mitra's *Antiquities of Orissa,* Vol. I, Pl. XIX, XXII, XXV, XXVI, XVII, XXXI, Vol. II, Pl. XXII, Cunningham's *Archæological Survey of India,* Vol. I, Pl. X, and Grünwedel's *Glasuren aus Pagan,* p. 64, *fig.* 48, will show. There can be not the least doubt that the influence seen at work in the plaques of Pagan have mainly emanated from the other side of the Bay of Bengal; but it will be remarked also that the Talaings and the Burmese, in copying, have impressed a character and style of their own on these pictorial representations of the Jātakas, and so created, to a certain extent, a new school, founded on the mediæval Indian one, which may be termed the Pagan School, and their technique, the Pagan technique.

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[1] *B. E. F. E. O.* 1909 "Le Stūpa de Boro-Budur," p. 41.

[2] Professor Grünwedel in his *Glasuren aus Pagan* (in the *Vèroffentlichungen aus dem Königlichen Museum für Völkerkunde*), p. 4, reduces them, from the plaques from the Maṅgalacetī at his disposal, to four.

[3] *Archæological Exploration in India,* 1906-07, Dr. J. H. Marshall, *J. R. A. S*, Oct. 1907, p. 1005.

[4] *Cf.* "*Buddhist Art in India,*" p. 2 and note 2, 86; Grünwedel's *Glasuren aus Pagan,* p. 10, 15; Phayre's *History of Burma,* p. 39.

Frescoes.—Between Nyaung-U and Pagan, at the village of Wet-Kyi-In, is the Ku-byauk-kyi pagoda. No account of its foundation is found in the chronicles nor in any of the inscriptions as yet known Tradition, however, assigns its foundation to King Kyanzit-tha (1084-1112) and in the *Phūrā-cañ-laṅkā*, a Burmese work in verse, in which are recorded the dates of pagodas and the names of the founders, its erection is likewise ascribed to the same king; moreover, in an inscription traced with ink on one of the interior walls of the pagoda itself, it is stated that it was repaired in A.D. 1468; the intervening years between the closing years of Kyanzit-tha's reign and that of the restoration of the building number only a little over 350, so that tradition and the statement of the Phūrā-cañ-laṅkā may be accepted with plausibility. The interest attaching to this pagoda does not lie in any peculiarity of its architectural style, but in the fine frescoes painted on the interior walls depicting scenes from the Jātakas. Their style is very much the same as that of the terracotta reliefs, and here again Indian influence is obvious. The relation ship between them and the paintings of Ajaṇṭā is striking.[1]

The complete series of the Jātakas was painted half on the southern and half on the northern wall. What now remains on the northern wall measures 13′ 11″ in length and 3′ 5″ in breadth; and on the southern wall 6′ 11″ × 3′ 5″. Most of what has disappeared was lost through the vandalism of a German, who, in 1899, did his best to remove them to a museum in Germany; and all would probably have disappeared, had he not been discovered before he could carry his intention into effect; what he had already removed from the walls he got rid of on the discovery of his theft. Out of the 547 frescoes which were originally painted, only 210 remain. Each Jātaka measures 5½″ × 6½″; the ground is chocolate; the hair is painted black; the dress of the personages, as well as the trees, black and white; and the nude parts of the body are coloured in burnt sienna. The legends are both in Pāli and archaic Burmese; the numbers immediately after the Burmese are the serial numbers of the Jātakas in each *Nipāta* or Book, the whole collection being divided into twenty-two Books. Figure 57 in Plate LX shows all that remains of the frescoes on the south wall; they cover an area of 6′ 11″ × 3′ 5″. Figures 58 and 59 are portions of the same.

Another pagoda has similar frescoes; it is at Nyaung-U, four miles to the east of Pagan. These paintings seem to be of the same age as those of the Ku-byauk-kyi.

In the descriptions of the illustrations the words "right" and "left" refer to the right and left of the reader.

List of the Jātakas.

The titles of the Jātakas are given according to Fausböll's edition; titles spelt differently or altogether different are placed within brackets after the numbers of the plaques reproduced in this paper. When the same scene is reproduced several times or representations of it from other pagodas are to be found in other publications, an asterisk is placed before the title of the Jātaka. As the plaques are numbered consecutively, I have not given the numbers of the plates in which they

[1] *Cf.* also the plates in Foucher's *Iconographie bouddhique de l'Inde.*

appear; for the frescoes of the Ku-byauk-kyi (Pl. LX), I have given the number of the figure, then of the row, and lastly, of the particular fresco in which the scene is represented; for instance, for 57-IV. 3 look up fig 57 (Pl. LX), the third fresco in the fourth row.

Abbreviations.

A. S. R.,	Archæological Survey of India, Report for 1906-07.
An.,	Ānanda Temple, Pagan (Plate LIV).
Db,	Dhammarājika Pagoda, Pagan (Plate LV)
E. P,	Eastern Petleik Pagoda, Pagan (Plates L and LI).
Glas,	Grünwedel's *Glasuren aus Pagan*, in the *Veroffentlichungen aus dem Königlichen Museum für Völkerkunde.*
Kb.,	Frescoes of the Kubyaukkyi Pagoda, Pagan (Plate LX).
Mc.,	Mangalacetī, Pagan (Plate LVI).
Ny.,	Nandawye Pagoda, near Kyauksê (Plate LVII).
Pd.,	Pathodawgyi Pagoda, Amarapura, near Mandalay (Plate LIX).
Sd.,	Shwesandaw Pagoda, Pagan (Plate LII).
Sh. P.,	Shwezigon Pagoda, Pagan (Plate LIII).
Sh. S.,	Shwezigon Pagoda, Singaing, near Kyauksê (Plate LVIII).

List of Jātakas.

*Aggika,	Sh. S., 48; Kb 57-VI, 7 (aggikabhāradvāja).
Aṇḍabhūta,	Kb. 59-III, 3.
Atthasadvāra,	Kb. 57-IV, 6.
*Anabhirati,	Kb. 57-III, 9; Glas. p. 10, fig. 16.
Apaṇṇaka,	Kb. 58-I, 1 (Apannaka).
*Amba,	Ny. 43; Kb. 57-VI, 2; A. S. R., pl. XLIII
Avāriya,	E. P. 9 (āvariya).
*Asampadāna,	Kb. 57-VI, 9; Glas. p. 11, fig. 18.
Asātamanta,	Kb. 59-III, 2.
Asilakkhaṇa,	Kb. 57-VI, 4.
Ucchaṅga,	Kb. 57-III, 11 (Uccaṅga).
Udañcani,	Kb. 57-V, 6 (Udañcanila).
*Udapānadūsaka,	Sh. S. 49 (Udapānatusa); Pd. 54.
*Ulūka,	E. P. 5; Sh. P. 20; Pd. 53 (Uluga).
Ekarāja,	Dh. 30.
*Kakkaṭa,	E. P. 4; Pd. 52; Kb. 57-VI, 3.
*Kaṭṭhahāri,	Kb. 57-I, 7; Glas. p. 21, fig. 30.
Kaṇavera,	Mc. 36 (Kanavira).
*Kaṇha,	Kb. 58-II, 1; Glas. p. 19, fig. 28.
Kalaṇḍuka,	Kb. 57-VI, 5.
Kālakaṇṇi,	Kb. 57-IV, 5.
Kimpaka,	Kb. 57-IV, 7.
Kuṇḍakapūva,	Kb. 57-V, 9 (Kuṇḍapuva).
Kumbhīla,	Dh. 28 (Kubhila).
Kulāvaka,	Kb. 58-II, 3.
Kuhaka,	Kb. 57-IV, 11.
Keḷisīla,	Mc. 35 (Kelisila).
Kosiya,	Kb. 57-VI, 8.

*Khadirangāra, Sh. S. 47 (Khatiranka ; Glas. p. 23, fig. 32.
Kharassara, Kb. 57-IV, 1 (Kharasana).
Gadrabha, Kb. 57-V, 11 (Katrabha).
Gandhāra, Mc. 38.
*Gāmani, Kb. 57-I, 8 ; Glas. p. 15, fig. 23.
*Godha, Mc. 37 ; A. S. R., pl. XLVI.
Ghatāsana, Kb. 57-VI, 11.
Cakkavāka, Dh. 33 (Cakavāka).
*Candakinnara, E. P. 12 (Candakinnarī) ; Glas p. 90, fig. 69.
Cullaseṭṭhi, Kb. 59-I, 1 (Cūlaseṭthi).
*Takka, Ny. 40 ; Kb. 57-III, 7 (Tagga).
Taṇḍulanāli, Kb. 59-I, 2.
Tayodhamma, Kb. 58-III, 2.
*Tittira, Kb. 57-II, 9 ; A. S. R. pl. XLV ; Glas. p. 83, fig. 64.
Tirīṭavaccha, E. P. 3 (Tirihavaccha ; some Burmese editions have Tirivaccha).
*Tilamuṭṭhi, Sh. P. 19 ; A. S. R. p. XLIV.
Thusa, Ān. 27.
Dīghitikosala, E. P. 7 (Kosalarāja).
*Dubbalakaṭṭha, Ny. 42 (°kattha) ; Kb. 57-V, 5.
Durājāna, Kb. 57-III, 8.
*Devadhamma, Sh S. 45 ; Kb. 59-I, 3 ; A. S. R. pl. XLII.
Naṅgalīsa, Kb. 57-VI, 1 (Naṅgalisa).
Nacca, Kb. 59-II, 1 (Najja).
Nanda, Kb. 57-II, 11 (Nanta).
Nandiyamiga, Dh. 32 (Nantiya).
*Nānacchanda, Pd. 56 ; A. S. R. pl. XLV (both = Nānāchanda).
Neru, E. P. 10.
Pañcagaru, Kb. 57-VI, 10.
Paṇṇika, Kb. 57-V, 2.
Parosata, Kb. 57-VI, 1.
Palāsa, E. P. 6.
Bhīmasena, Kb. 57-IV, 2 (Bhimmasena).
*Bherivāda, Kb. 58-III, 3 ; Glas. p. 12, fig. 20.
*Baka, Sh. P. 18 ; Dh. 29 ; Kb. 57-II, 10.
Bandhanāgāra, Mc. 34 (Bandhanākāra).
*Bāveru, Sh. P. 21 ; Sh. S. 50 (Pāveru).
Bāhiya, Kb. 57-V, 8.
Biḷāra, Kb. 57-VI, 6 (Bilāra).
Maṁsa, Ān. 26 (Sabbamaṁsa).
*Makkhādeva, Kb. 57-I, 9 (Magha°) ; A. S. R. pl. XLII.
Maṅgala, Kb. 57-IV, 9.
Maccha, Kb. 59-II, 3.
*Mandhātu, E. P. 2 (Mandhāta) ; Pd. 51.
Migapotaka, E. P. 8 (Miga° ; some Burmese editions have : Migaposaka).
Mittavindaka, Kb. 57-V, 4 (Mittavinta).
Muṇika, Kb. 58-II, 2 (Maṇiga).
*Mudulakkhaṇa, Ny. 41 ; Kb. 57-III, 10.
Rādha, Ān. 25 ; Ny. 44 (Poṭṭhapāta) ; Glas. p. 68, fig. 52.
*Lakkhaṇa, Sh. P. 17 ; Kb. 57-I, 11 ; A. S R. pl. XLII.
*Vaṭṭaka, Sd. 13[a], 13[b] ; Kb. 57-II, 7 (Vattaka) ; Glas. p. 102, fig. 82.

Vaṇṇāroha,	Dh. 31 (Vaṇṇaruha).
Vaṇṇupatha,	Kb 58-I, 2 (Vaṇṇapatha).
*Vānarinda,	Kb. 58-III, 1 ; A.S R. pl. XLIII.
Valāhassa,	Ān. 24 (Valāhaka).
Veri,	Kb. 57-V, 3.
*Sakuna,	Sh. S. 46 (Sakuna) ; Kb. 57-II, 8 (Saguna).
Saṅkhadhama,	Kb. 59-III, 1
*Satapatta,	Pd. 55 ; Glas. p. 78, fig. 60.
Sabbasaṁhāraka,	Kb. 57-IV, 10 (Sabbasāhāika).
Samugga,	E. P. 11 (Samukka).
Samuddavāṇija,	Mc. 39 (Samundapāniya).
Sammodamāna,	Kb. 59-II, 2.
Sārambha,	Kb. 57-IV, 10
Sālaka,	E. P. 1. (Sāla).
Sālittaka,	Kb. 57-V, 7 (Sālitaka).
Sirikālakaṇṇi,	Ān. 23 (Sirīkālakaṇḍī).
Sīlavīmaṁsa,	Kb. 57-IV, 8 (Sīlavimaṁsa).
*Sukhavihāri,	Kb. 57-I, 10 (Sukkhavihāri) ; Glas. p. 79, fig. 62 (through inadvertence, Grünwedel gives this title as Sukkavihārī, but the legend on the plaque has rightly sukhavihāri).
Surāpāna,	Kb. 57-IV, 3 (Suiāpāṇa).
*Serivāṇija,	Kb. 58-I, 3 (Serivā merely) ; Glas. p. 78, fig. 61.

FIG. 1. SĀLAKA-JĀTAKA—249.

(*Fausb. ii. 266.*)

A snake-charmer gets his livelihood by making a monkey play with a snake. He goes to a festival, merrymaking for seven days, after entrusting his monkey to a merchant who is the Bodhisattva ; on his return, he beats the monkey, ties him up and falls asleep ; the animal loosens his bond, runs up a mango tree, eats a mango and throws the stones on the sleeper, who tries to coax him down with the intention of giving him a sound thrashing ; but the animal flees and is lost in the forest.

On the right hand ,with an umbrella above him, and seated on a stool, is the merchant ; he seems to be holding a conversation with the monkey up in the mango tree ; this is not in accordance with the story, in which only the snake-charmer and the monkey are in the forest. On the left, the snake-charmer, holding in both hands what appears to be a large snake.

The legend reads : *Sāla* for *Sālaka*. The umbrella, in all these plaques, indicates the Bodhisattva. It will be remarked that all the trees, excepting the palm and cocoanut trees, are conventional ; the animals, on the other hand, are finely modelled.

FIG. 2. MANDHĀTU-JĀTAKA—258.

(*Fausb. ii. 310.*)

Mandhāta was king in the first cycle ; he lived through innumerable ages. Discontented with his kingdom, he sets rolling the "Wheel of Empire" and goes to the Trayastriṁśa heaven, whose king Śakra, gives him half his kingdom to rule over.

Still discontented with this, he comes down again to earth, where he dies at last in a park, surrounded by his courtiers.

Mandhāta in his chariot, arrives at the Trayastrimśa heaven; behind him, a figure is holding an umbrella over him. The elephant, somewhat defaced, is Airāvata, Śakra's monture, and indicates the latter's heaven. The larger figure above the elephant is Śakra on his stone-seat and, behind him, a devatā, placed there to represent the throng of gods who came to meet Mandhāta. Between the latter and Śakra is a small broken object which cannot be identified. Perhaps it represents the Wheel (*cakra*) of Mandhāta. The inscription reads . *Mandhāta-jāt.*

FIG. 3. TIRĪṬAVACCHA-JĀTAKA—259

(*Fausb. ii. 314.*)

Tirīṭavaccha, the Bodhisattva, was then a brahmin in Benares, and became an ascetic on his father's death. The king, quelling a disturbance on his frontiers, is worsted in an encounter, and flees on his war elephant through the forest. He arrives at Tirīṭavaccha's hermitage, and, overcome with a parching thirst, manages to get down into the well, but he finds it impossible to come out of it. After a time, the hermit, who has been collecting fruits in the forest, arrives at the spot, sees the king's plight, rescues him and tends him for two or three days. The king shows his gratitude by building a hut for Tirīṭavaccha in his own park and attending to his wants.

In the middle of the plaque, the well with the king at bottom; on the right Tirīṭavaccha, the ascetic, comes to rescue the king; above the well, the elephant waiting for the latter, and under him, three steps leading to the well.

The inscription reads: *Tiriṭavaccha.* Some Burmese editions have *Tirivaccha.*

FIG. 4. KAKKAṬA-JĀTAKA—267.

(*Fausb. ii. 341.*)

The Bodhisattva becomes an elephant and lives in the Himalayas. Not far off is a lake wherein lives a monstrous crab, as large, it is said, as a threshing floor; it feeds on the elephants that come to drink at the lake. The Bodhisattva resolves to put an end to the monster; so, he allows him to catch hold of his leg with its claw; the elephant pulls and tugs, but in vaiṇ; he cannot so much as make him budge; he trumpets with the fear of death; all the herd flees, including his mate; but on calling her she comes back and, to secure her mate's release, gives high praise to the crab; the latter, on hearing the female voice, lets go its hold, and immediately the Bodhisattva crushes it to death with one foot.

The plaque represents the crab holding the elephant in its claw. On the left, badly broken, may be seen the Bodhisattva's mate inducing the monster to let go its hold. *Cf.* Cunningham's *Bharhut,* Pl. XXV, 2, and frontispiece to Vol. ii of the *Cambridge translation of the Jātakas.* *Cf.* Pl. i, fig. 2, *Archæological Exploration in India,* 1906-07, p. 1004.

FIG. 5. ULŪKA-JĀTAKA—270.

(*Fausb. ii. 352.*)

In the first cycle, men chose a handsome, portly and perfect man as their king; the quadrupeds chose the lion as king; and the fish selected as theirs the monster fish Ānanda. Then, all the birds thought it was but meet for them to have a king also: so, they assembled on a rock in the Himālayas to choose one. The choice fell on the owl. The crow, however, disliking the surly and unprepossessing mien of the owl, rose up in the air and entered a protest against his election; furious, the owl pursued him. This, it is said, was the beginning of the deadly feud between crow and owl. The birds then elected the golden goose for their king.

The upper three birds represent all the birds assembled in the Himālayas, the lower three are the heroes of the story; on the right, the owl; on the left, the golden goose; and between them, the crow. Cf. fig. 20, from the Shwezigon, Pagan, and fig. 53, from the Pathodawgyi Pagoda, Amarapura.

FIG. 6. PALĀSA-JĀTAKA—370.

(*Fausb. iii. 23.*)

The Bodhisattva was a golden goose; he lived in a golden cave on mount Chittakūṭa. On the road he frequented there was a *butea* tree, and upon it he would rest every day while going to and fro. In the course of time he made friends with the sprite dwelling in that tree. One day, a fowl, having eaten a ripe banyan fruit, came to the *butea* tree and dropped its excrement into one of its forks. Soon after a young banyan shot up and grew to the height of four inches. The golden goose, on seeing it, advised the tree sprite to destroy it, for if he did not do so, the banyan would soon destroy the *butea* tree. But the sprite would not listen, and the banyan, growing, broke down the tree, the abode of the tree-god falling to the ground with a branch.

To the left, on a very much conventionalized tree, is the tree-god, with folded hands, listening to the advice of the Bodhisattva, the head only of the golden goose is visible, the body being broken off.

FIG. 7. DĪGHITIKOSALA-JĀTAKA—371.

(*Fausb. iii. 211.*)

Brahmadatta, king of Benares, subjugates the kingdom of Kosala, and its king, Dīghiti flees with his queen and hides in abject poverty; their son, Dīghāvu, is the Bodhisattva. Some years after, Dīghiti and his queen are found out, and they are tortured and put to death by Brahmadatta. Dīghāvu witnesses the horrible execution and swears revenge. He enters the service of Brahmadatta; one day, in the forest, as the king is sleeping with his head on the lap of the Bodhisattva, the latter raises his sword to smite him, but forbears, remembering the last words of his father asking him to have forbearance. At that very moment, Brahmadatta opens his eyes, sees the sword and begs for his life; explanations ensue, and both become great friends. When back at the palace, the king of Benares asks of Dgīhavu to make clear

PICTORIAL REPRESENTATIONS OF JĀTAKAS IN BURMA.
EASTERN PETLEIK PAGODA, PAGAN.



1. SĀLAKA-JĀTAKA-249.



2. MANDHĀTU-JĀTAKA-258.



3. TIRĪTAVACCHA-JĀTAKA-259.



4. KAKKAṬA-JĀTAKA-267.



5. ULŪKA-JĀTAKA-270.



6. PALĀSA-JĀTAKA-370.

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the meaning of Dīghiti's last words. Dīghāvu receives back the throne of his forefathers.

The plaque represents two distinct scenes. On the left, Brahmadatta sleeping on the Bodhisattva's lap; the latter has his sword raised; the tree, which is very schematic, represents the forest; on the right, seated alone on a stool, Dīghāvu explains the hidden meaning of his father's words. His figure is badly spoiled and the umbrella over him is broken off, but the traces of it are still quite visible. In front of him is Brahmadatta, and behind him, his queen. The faces are broken, but the queen can be made out by her developed breasts, and by her heavy chignon and large ear-ornaments in distended ear-lobes, which bespeak South Indian influence. It will be remarked that, in both scenes, the Bodhisattva is very much taller than the other figures. The principal personage in a group is generally much taller than the others, whether it be the Bodhisattva, a king or a queen; this is particularly the case in the stone carving of the Ananda corridors. Legend: "*Kosalarāja-jāt 371.*" This story is only alluded to in the Jātaka: Vol. iii, 211 and 487; vi, 44 and in several other places; it is also mentioned in the Dhammapada Aṭṭhakathā under the stanza: "*Na hi verena verāni*"; the complete story is found in the Mahāvagga of the Vinaya, X, 2. See my *Story of Dīghavu, from Burmese sources* in *Buddhism*, 1908, Vol. II, 289 ff.

FIG. 8.—MIGAPOTAKA-JĀTAKA—372.

(*Fausb. iii. 213.*)

The Bodhisattva is the god Sakka. At that time an ascetic finds a young deer that had lost its dam; the ascetic takes it to his hut and cares for it tenderly. One day the deer dies from eating too much grass, and the ascetic, inconsolable, goes about lamenting. Sakka sees him, and by way of admonition, recites stanzas showing how useless it is to weep for the dead; the ascetic sees the justness of the Sakka's words, and his sorrow ceases.

At the foot of a tree the young deer lies dead; to the right, Sakka, poised in the air, admonishes the ascetic who, crouching, laments the loss of his deer. The legend reads: ***Miga-jāt***; some Burmese editions have ***Migaposaka***.

FIG. 9. AVĀRIYA-JĀTAKA—376.

(*Fausb. iii. 229.*)

The Bodhisattva, who is an ascetic, dwells for twelve years in the royal garden, where his wants are attended to by the king of Benares. While returning to his wilderness, he gives to a foolish ferryman, as his fare, advice as to how to increase his wealth, his welfare and his virtue. The fool, displeased at this, throws the ascetic down and strikes him on the mouth. The ferryman's wife tries to restrain him, but her also he beats; the plate of rice she was bringing him falls down and breaks and she has a miscarriage.

The plaque represents the ascetic teaching the Law to the king, who listens with folded hands; behind the king and sitting on the ground, the queen. The legend runs: *Āvariya-jāt.*

FIG. 10. NERU-JĀTAKA—379.

(*Fausb. iii. 246.*)

The Bodhisattva, then a golden goose, lives with his younger brother on Mount Cittakūṭa. One day, they alight on Mount Neru and perceive that owing to its lustre, all birds and animals assume indiscriminately a golden colour. Not well pleased at this, they fly back to Cittakūṭa.

The plaque represents birds and animals on Mount Neru. In the upper row, to the right, the Bodhisattva conversing with his brother, who faces him; below, from the left, a crow, a jackal, and a lion; the jackal's coat is shown by small wavy lines. The lion is particularly interesting; the mane is very schematic, every lock being carefully represented; this, as well as its elephant-head, seems to point to western Asiatic influences through Sāñchī and Ajaṇṭā. The nimbus around the head of the two animals and of the crow represents, no doubt, the golden hue caused by the refulgence of the mountain, and points to Gandhārian influence.

FIG. 11. SAMUGGA-JĀTAKA—436.

(*Fausb. iii. 527.*)

The Bodhisattva is an ascetic in the Himālayas. An Asura (demon) comes from time to time to listen to his preaching, but this does not prevent him from devouring men. One day, he catches a beautiful lady who was travelling, makes her his wife and, to keep her safely, puts her in a box which he swallows. One day he goes to bathe, takes the box out, places it on the ground and allows her to breathe a little fresh air. A magician is just flying through the air and she beckons to him; he comes, and she places him in the box, binding him with her clothes. Unsuspecting, the Asura swallows the box again. On his way, he visits the ascetic who points out to him that two persons, not one, are in the box; the Asura places the box before the ascetic, and on its being opened, the magician flies away. The demon is converted and lets the woman go her own way.

On the right hand, the ascetic on a stool preaching to the Asura: the figure of the latter has crumbled off, but the outlines of it are still clearly visible in the middle; on the left, the box, and within it, the woman. The legend reads: *Sumukka-jāt.*

FIG. 12. CANDAKINNARA-JĀTAKA - 485.

(*Fausb. iv. 282.*)

The Bodhisattva is reborn as a fairy (Kinnara) with the name of Canda, and with his mate lives on a silver mountain. The king of Benares is hunting all alone. He sees the two fairies, falls in love with the female and, to take possession of her, shoots the husband, whom he wounds mortally; his mate laments, and the king shows himself, but the fairy anathematizes him and calls on the gods to save her beloved husband. Sakka hears her appeal, comes down from his heaven, and

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7. DĪGHITIKOSALA-JĀTAKA-371.



8. MIGAPOTAKA-JĀTAKA-372.



9. AVĀRIYA-JĀTAKA-376.



10. NERU-JĀTAKA-379.



11. SAMUGGA-JĀTAKA-436.



12. CANDAKINNARA-JĀTAKA-485.

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assuming the form of a brahmin, sprinkles water on Canda, who immediately stands up perfectly well.

On the left, the king, in the act of shooting the kinnara Canda, who stands near a tree, his right arm thrown up and his left hand on his breast, where he has been wounded; near him, his mate the kinnarī; behind and above the two fairies, Sakka is seen flying down to rescue Canda. This representation is not quite according to the story, for the two fairies are standing, whereas in the jātaka they are lying down when the king shoots the male. The inscription reads: *Kinnarījāt.*

FIG. 13 (*a*) VAṬṬAKA-JĀTAKA—35.

(*Fausb. i. 213.*)

The Bodhisattva is a young quail in Magadha, as yet unable to fly. A great jungle fire rapidly approaches the spot where the Bodhisattva is in its nest. All the birds fly away and his very parents abandon him. As he is without any protection, he pronounces in order to save himself an act of asseveration (*saccakiriyā*), by the efficacy of which the flames are driven back and go out. By this miracle is he saved.

The plaque is very badly damaged but, on careful examination six quails, in the act of flying from the fire, may be seen, three on each side; the circle in the middle in which a seventh quail, the Bodhisattva, is now invisible, represents the jungle fire and the spot untouched by it; all round it were stylized flames, which have now disappeared. This picture may have served as the prototype of the one illustrating the same story on page 102 of Grünwedel's *Glasuren aus Pagan*, which is reproduced here in *fig.* 13 (*b*).

Out of the few plaques recovered from Shwesandaw, this is the only one bearing an inscription; it is in Pali and Burmese and runs: *Vattaka-jac phūrhālon:ṅuṁ amyo;* "Vaṭṭaka-jātaka, the Bodhisattva is a quail." The spelling "jac" for jat, is interesting, in that it shows a slight Talaing influence. On the plaques of the Ānanda temple, which dates from the 11th century A.D., a final palatal *c* is sometimes found where a final dental *t* is now used, in pure Talaing words; for instance, old Talaing: *āc* (to beg) now *āt;* old Talaing *ñāc* (to see) now *ñāt;* so, in this plaque we have *jac*=*jāt*.

Figures 14, 15 and 16 cannot be identified. There is nothing in them to give a clue to any particular jātaka. They have been included here only to show how dilapidated the plaques from Shwesandaw are, and how difficult it is to identify a great number of these scenes without either the name of the jātaka or its number. No. 16, for instance, might represent the Gandhāra-jātaka (No. 406, Fausb. iii. 364); but there are several other jātakas in which two ascetics are concerned.

FIG. 17. LAKKHAṆA-JĀTAKA—11.

(*Fausb. i. 143.*)

The Bodhisattva is reborn as a stag, and is the leader of a thousand deer, with two sons. At harvest time when the approaches to villages and fields are dangerous

for deer, the Bodhisattva confides to each of his sons five hundred deer, and emphasizes the dangers of the season. The elder son, Lakkhaṇa, through foresight and care, manages so well his herd, that not one of them is lost; but the younger, through ignorance and recklessness, loses most of them and comes back to the old haunt with only a very few survivors. The Bodhisattva receives Lakkhana with words of praise.

On the right, on a flat stone, the Bodhisattva praises Lakkhaṇa, who is directly opposite to him; below, near Lakkhaṇa is a single deer to represent the whole herd safely returned; on the right, near the Bodhisattva, the younger foolish deer.

Cf. with this plaque the one in *Archæological Survey Annual, 1906-07*, Plate XLII, fig. 11, illustrating the same story. It will be seen how schematic and stiff ours is, compared with the Petleik plaque, which is full of life and grace.

FIG. 18. BAKA-JĀTAKA—236.

(*Fausb. ii. 234.*)

The Bodhisattva is reborn as the leader of a shoal of fish in a pond in the Himalayas. A crafty crane, desiring to eat fish, takes his post near the pond, drooping his head, spreading his wings, with a vacant look in his eyes, trying to put the fish off their guard. The shoal come, see him and taking him for a holy, virtuous crane, praise him; but the Bodhisattva enlightens them as to his real intentions; then the fish splash in the water and frighten away the crane.

A lotus plant separates the crane from the fish; the biggest fish is the Bodhisattva; the two others represent the shoal; at the root of the lotus plant is a crab. *Cf.* fig. 29 from the Dhammarājika Pagoda.

FIG. 19. TILAMUṬṬHI-JĀTAKA—252.

(*Fausb. ii. 277.*)

The Bodhisattva is a renowned teacher at Takkasilā. The king of Benares sends his son to him to be placed under his tuition. One day, while going to bathe with his teacher, the prince takes a handful of white seeds which an old woman is drying in the sun, and eats them. She says nothing, but, when on the morrow and the day after he again steals a handful, it is more than she can bear and she complains to the teacher who, to punish and teach him better manners, orders two pupils to hold him by his two hands, while he strikes him thrice on the back with a piece of bamboo.

It will be remarked that the illustration is not quite according to the jātaka. First, the punishment is supposed to be administered on the way to the bathing place, while here the Bodhisattva is represented as sitting in front of his house; he holds the prince's top-knot with his right hand and chastises him with the left; the two pupils do not hold the hands of the prince, but have their own folded before the breast in the usual attitude of reverence. On the left, behind the pupils, is the old woman in the same posture.

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13. *a*. VAṬṬAKA-JĀTAKA-35.



13. *b*. VAṬṬAKA-JĀTAKA-35.



14.



15.



16

14—16. UNIDENTIFIED.

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FIG. 20. ULŪKA-JĀTAKA—270.

(*Fausb. ii. 352.*)

This jātaka has already been explained in connection with fig. 5. In the present plaque an owl is seen in the right hand corner, and before it, two birds, below which is a peacock with a crow (?) between him and the throne; on the throne, under an umbrella, the golden goose king.

We are to suppose that, on that occasion, the peacock was the bird which announced three times that the owl had been elected king, and the crow (?) before him is the dissident member of the assembly. It is noteworthy that the plaque just described would far better illustrate the Mora-jātaka (*Fausb. ii, 33, No. 159*), in which case the bird in front of the peacock must be considered as the daughter of the king Golden Goose choosing her husband, the three birds above representing the rejected suitors.

FIG. 21. BĀVERU-JĀTAKA—339.

(*Fausb. iii. 126.*)

The Bodhisattva is reborn as a young peacock. At that time, it is said, in the kingdom of Bāveru, there was not a single bird. Some merchants, going there, bring with them a crow. The natives of Bāveru bought it for one hundred pieces of money; it was placed in a golden cage and fed with fish, meat and fruits. The next time, the merchants bring with them the peacock; the people of Bāveru, delighted, buy it for a thousand pieces and feed him on all kind of delicious delicacies. Thus the peacock receives the highest honour, and from that day, the crow is despised and left to itself. The crow is compared to heretics, the peacock to the sweet-voiced Buddha.

On a stand is the peacock, the umbrella over it indicating that it is the Bodhisattva; a woman is offering food to it; near the stand is the now despised crow.

Fig. 22. This has not yet been identified; the inscription has completely disappeared. It is one of the very best plaques to be found on the Shwezigon, the figure of the Bodhisattva and of the woman being admirably modelled. Most of the plaques must have been as good as this as they came from the mould before glazing; the present plaque has a very thin coating of glaze, thus leaving all the details perfectly distinct.

FIG. 23. SIRIKĀḶAKAṆṆI-JĀTAKA—192.

(*Fausb. ii, 115.*)

The people of Mithila are cleaning the roads for the king. The king of Videha and his Queen Udumbara Devī happen to come out before the cleaning of the road is completed; and the Queen, seeing Piṅguttara, her former husband, cleaning the road, smiles. The king observing her smile, is angry and asks her the cause of it. She explains to him the fact, but the king disbelieves her. He says that she smiled because she saw some one else, and he is about to kill her with his sword. She

pleads that the sage should be consulted. The king consults the sage, Mahosada, who says that the person who was her former husband must be an unlucky wretch, and that good luck and ill luck could never mate together.

On the left are the king and the queen in a chariot. In front is the sage Mahosada standing. Kneeling by his side is Piṅguttara holding a hoe. The legend reads "*Sirī-kālakaṇḍī-jāt*, 192."

FIG. 24. VALĀHASSA-JĀTAKA—196.

(*Fausb. ii. 127.*)

The scene is in Ceylon, at the town of Sirisavatthu, inhabited by ogresses who are in the habit of roaming along the seashore in search of shipwrecked sailors, luring them to their homes, making husbands of them and finally devouring them. Five hundred shipwrecked traders were thus enticed away; their chief, however, discovers that they are not women, but goblins, and asks the five hundred men to flee; half of them refuse, kept back by carnal desires; the others resolve to flee with their leader, and do so. The Bodhisattva is then a flying horse, with a beak like a crow, and hair like muñja grass. He crosses from the continent over to Ceylon to eat paddy, and cries aloud in human speech "who wants to go home?" The 250 traders are anxious to go; the Bodhisattva bids them to cling to him, and sets down each of them in his own house.

The plaque speaks for itself. It will be remarked, however, that the lower part of the horse's head seems to be missing, so that the crow's beak is not to be seen. *Cf.* Anderson "*Catalogue and Hand-Book of the Indian Museum*," page 187, where a flying horse "with two *children* hanging on to its beak, and one to the right foreleg and another to the right hindleg" is depicted on a pillar from Mathurā. The scene probably represents this jātaka. Legend: *Valāhaka.*

FIG. 25. RĀDHA-JĀTAKA—198.

(*Fausb. ii. 132.*)

The Bodhisattva is a parrot by name Rādha with a younger brother called Poṭṭhapāda, living in the house of a brahmin, who takes tender care of them. The brahmin's wife is an exceedingly passionate woman. The brahmin has to go on business, and he bids the two parrots to watch closely, at all times, his wife, and see whether she receives male visitors. As soon as he is gone, the woman receives a large number of male friends. The younger parrot commits the imprudence of warning her, and she wrings its neck. Rādha keeps silent, and tells all to the brahmin on his return, but he is afraid of the woman's vengeance, and so takes to flight.

The plaque represents two scenes. In the first, to the left, in his house is the brahmin (seated on the right) about to go on business and making over the two parrots to the care of his wife. In the second, on the right is the woman. She has just wrung the neck of Poṭṭhapāda and holds its head in her left hand; the dead bird lies on a small stool; above is the prudent Rādha.



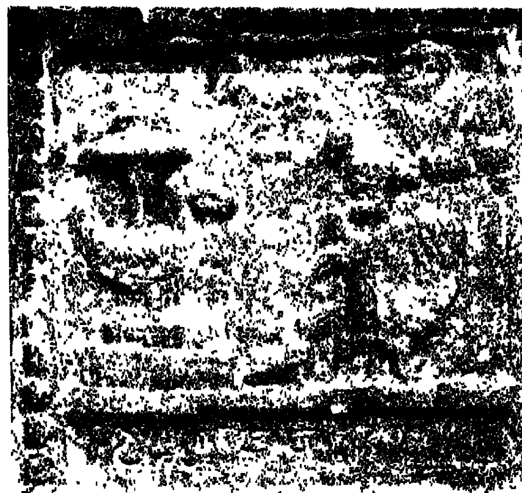
17. LAKKANA-JĀTAKA-11.



18. BAKA-JĀTAKA-236.



19. TILAMUṬṬHI-JĀTAKA-252.



20. ULŪKA-JĀTAKA-270.



21. BĀVERU-JĀTAKA-339.



22. UNIDENTIFIED.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

FIG. 26. MAṀSA-JĀTAKA—315.

(*Fausb. iii. 48.*)

The Bodhisattva is the son of a rich merchant. While he is conversing with three other youths at cross roads, there comes along a hunter with venison on his cart. The youths, each in turn, ask him for a piece of venison and the deer-stalker gives, to the first, the hide and bones; to the second, a joint; to the third, a succulent piece of meat—according to the degree of politeness shown by each in his request; but to the Bodhisattva, he gives all the meat in his cart, because he calls him "his friend," in which title all that is dear is implied.

The deer-stalker is on his cart; in front of the cart, the Bodhisattva. A thick coating of glaze has blurred the figures. The legend reads: "*Sabbamaṁsa-jāt, 315.*"

FIG. 27. THUSA-JĀTAKA—338.

(*Fausb. iii. 122.*)

The Bodhisattva is a far-famed teacher at Takkasilā. The son of the king of Benares has completed his studies under him, and is about to take leave. The Bodhisattva then foresees that the prince's son will later on try to seize the throne from his father by four times attempting his life; he therefore composes four stanzas to be recited each on a separate occasion which will defeat the plotter's schemes. The plots accordingly fail.

The Bodhisattva is seated in front of his house, teaching the stanzas to the prince of Benares who is kneeling in front of him; behind the prince, are two other disciples.

FIG. 28. KUMBHĪLA-JĀTAKA—224.

(*Fausb. ii. 206.*)

The Bodhisattva is a monkey, living on the bank of a river, in the middle of which is an island covered with fruit trees; in mid-stream, between the bank and the island is a flat rock. Every morning, the monkey jumps from the bank on to the rock and thence on to the island, returning by the same way in the evening. A broad-headed crocodile wants to catch him, and lies in wait on the rock, telling the monkey his purpose. The Bodhisattva has no other way of coming back from the island; so he says he will deliver himself up to the crocodile and bids him open his jaw; when the crocodile opens his mouth, his eyes are closed; the monkey knows that, and he jumps on the monster's head and thence on shore, without breaking his word; the crocodile has merely failed to catch him.

On the right, is the monkey, his arms close to his sides, in the act of taking his jump; in the middle, the crocodile with the monkey alighting on his head; the tree on the left marks the river bank. Legend: *Kubhila-sat, myok, 224* "Kumbhīla-jātaka, (the Bodhisattva is) a monkey." The error: "sat" for "*jāt,*" is remarkable. The full story is told in Fausb. i. 278, No. 57, Vānarinda Jātaka; *cf.* also: Cariyāpiṭaka.

FIG. 29. BAKA-JĀTAKA—236.

This jātaka has been explained under Plate IV, fig. 18.

FIG. 30. EKARĀJA-JĀTAKA—303.

(*Fausb. iii. 13.*)

The Bodhisattva is king of Benares, a most peaceful and holy king. A minister misconducts himself in the harem and he banishes him from the kingdom. The minister takes service with Dabbasena, king of Kosala, and induces the latter to invade Benares. The king of Benares is seized and suspended head downwards; but with a great feeling of charity towards his enemy, he enters into a deep mystic trance, bursts his bonds and sits cross-legged in the air. Dabbasena receives forgiveness, and the Bodhisattva becomes an ascetic.

On the right is the Bodhisattva seated in the attitude of meditation; the wavy lines about him represent the sky, on his right, an umbrella; in the middle, Dabbasena, and behind him, his queen. Dabbasena and his queen have each a nimbus, which points to a misunderstanding of the story, for they are not entitled to it; such a mistake is frequent in the Ānanda plaques. Legend: *Ekarāja-jat, maṅ rasiy, 303;* "Ekarāja-jātaka, (the Bodhisattva is) an ascetic king; *cf.* Mahāsīlava-jātaka, Fausb. i., No. 51.

FIG. 31. VAṆṆĀROHA-JĀTAKA—361.

(*Fausb. iii. 191.*)

The Bodhisattva is a tree-god, who takes no active part in the story, but simply witnesses it A lion and a tiger lived amicably together; a jackal attends on them, and grows fat on their largesses. One day, he is seized with the desire to eat lion's and tiger's flesh, and in the hope that his two masters will kill each other, he sows discord between them, but he fails in his endeavour to make them quarrel, and in fear for his own life, flees elsewhere.

On the right, the tree-sprite; below, the lion and the tiger discussing the jackal's crafty insinuations; above, the jackal in flight. The inscription reads: *Vaṇṇaruha-jat, sacpan nat;* " Vaṇṇāroha-jātaka, (the Bodhisattva is) a tree-god "; *below* the inscription the number of the jātaka: 361.

FIG. 32. NANDIYAMIGA-JĀTAKA—385.

(*Fausb. iii. 270.*)

The Bodhisattva is a deer in Kosala (Oudh) by name Nandiya, and he supports both his parents. The king of Kosala is a mighty hunter, but spoils the crops in the pursuit of his favourite sport and the people decide on stocking his own park with deer. They beat the thickets for this purpose. Nandiya manages to get driven alone in the park and saves his parents. The king kills a deer every day; the Bodhisattva's turn to be shot comes, but owing to his virtue, the king is unable to shoot him. Nandiya remonstrates with him, obtains from him security of life for all animals and returns to his parents.

PICTORIAL REPRESENTATIONS OF JĀTAKAS IN BURMA.
ĀNANDA PAGODA, PAGAN.



23. SIRĪKĀLAKAṆṆI-JĀTAKA-192.



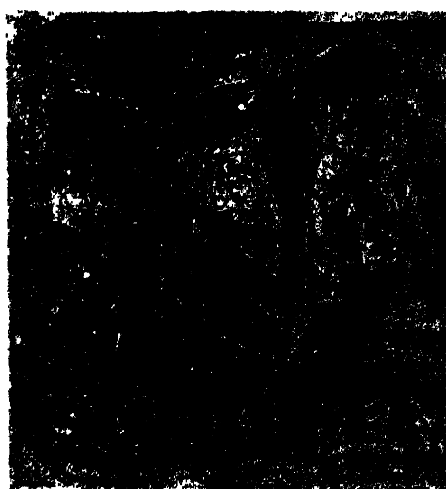
24. VALĀHASSA-JĀTAKA-196.



25. RĀDHA-JĀTAKA-198.



26. MAṀSA-JĀTAKA-315.



27. THUSA-JĀTAKA-338.

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PICTORIAL REPRESENTATIONS OF JĀTAKAS IN BURMA.
DHAMMARAJIKA PAGODA, PAGAN.



28. KUMBHĪLA-JĀTAKA-224.



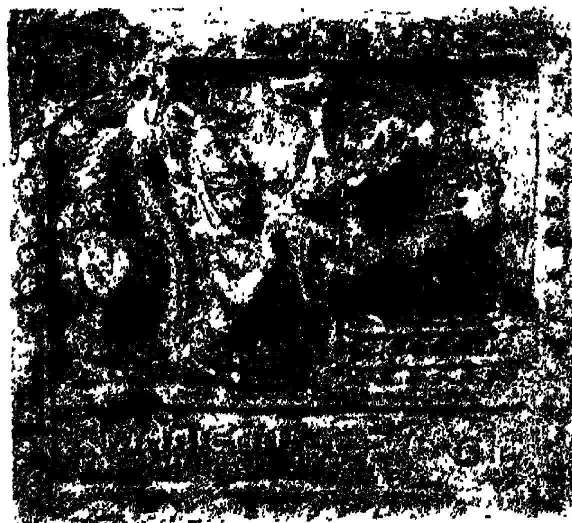
29. BAKA-JĀTAKA-236.



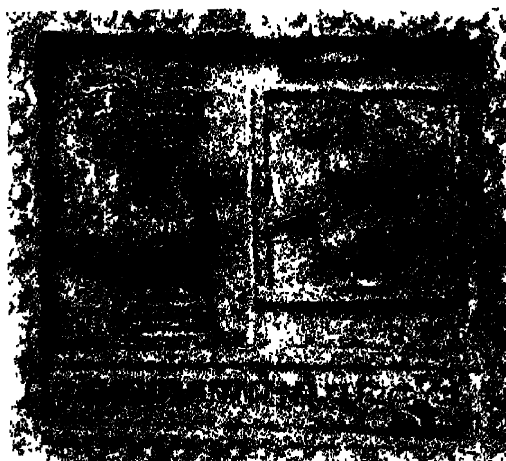
30. EKARĀJA-JĀTAKA-303.



31. VAṆṆĀROHA-JĀTAKA-361.



32. NANDIYAMIGA-JĀTAKA-385.



33. CAKKAVĀKA-JĀTAKA-434.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

Nandiya, on a lotus throne, with his right foreleg lifted in the attitude of conversation, is remonstrating with the king; the umbrella shows him to be the Bodhisattva. The king is crouching before him, and his queen, with the South Indian typical low chignon and enormous ear-ornaments, is behind him; the tree represents the royal park. The legend reads: *Nantiyamiga-jat, samaṅ, 385*; "Nandiyamiga-jātaka, (the Bodhisattva is) a deer." *Cf.* Nigrodhamiga-jātaka, Fausb. i. 149.

FIG. 33. CAKKAVĀKA-JĀTAKA—434.

(*Fausb. iii. 520.*)

The Bodhisattva is a golden goose, living with his mate near a lotus-pond, and feeding only on the succulent *sevala* (the vallisneria) plant. A crow feeding on all sorts of carrion, sees the golden geese, and thinks they owe their beauty to the food they eat; he is soon deceived, for the Bodhisattva makes him understand that beauty is not due merely to the kind of food eaten; but also, and above all, to character and conduct.

On the left, the square represents the lotus-pond, with the two golden geese near it; the goose above, with the umbrella, is the Bodhisattva; on the right, the crow standing on a pedestal, which is no doubt intended for a rock. The legend reads: *Cakavāka-jat vaṁmay, 434*; "Cakkavāka-jātaka, (the Bodhisattva is) a goose"; the modern Burmese for goose is: *vambhay.*

FIG. 34. BANDHANĀGĀRA-JĀTAKA—201.

(*Fausb. ii. 139.*)

The Bodhisattva is a poor man supporting his widowed mother; against his will, the mother brings him a wife home. He wishes to become an ascetic, but his wife keeps him back by specious pretexts, and bears him two sons; at last he escapes to the Himalayas, and exults in having broken the bonds of wife, child and passion.

The Bodhisattva on a flat stone, distinguished by the umbrella, and by the nimbus. Before him, trying to dissuade him from his purpose, his mother and wife. Legend: *Bandhanākāra-jat, phurhāloṅ rasiy, 201*; "Bandhanāgāra-jātaka, the Bodhisattva is a rishi.

FIG. 35. KEḶISĪLA-JĀTAKA—202.

(*Fausb. ii. 142.*)

The Bodhisattva is Sakka, the king of the Tāvatiṁsa gods. Brahmadatta, king of Benares, cannot endure anything that is old or decrepit, whether animals, objects, or human beings; the first he chases away; the second, such as carts, he gets broken up; he beats old women and makes old men play and gambol on the ground. The result is that all old persons are sent away to other countries; men do not tend their old parents and, as a consequence, are reborn in hell; and the throngs of the Tāvatiṁsa gods diminish sensibly. Sakka resolves to put a stop to this and to punish the king, he assumes the shape of an old man, driving an old cart

with two old bullocks on which are two jars of butter-milk and presents himself to Brahmadatta while he is making a solemn procession, making himself visible to him alone. The king orders the cart to be smashed, but nobody sees it. Sakka approaches and breaks a jar of butter-milk on the king's head, then assumes his proper form and, poised in the air, thunderbolt in hand, upbraids Brahmadatta and sets forth the advantages of reverence to parents and old age.

On the left Sakka as an old man in the act of pouring butter-milk on the king who throws up his right arm in disgust; the cart is not represented. On the right, Sakka on a cloud rebuking the king, with the thunderbolt in his right hand; the *vajra* (thunderbolt) has not the shape it has in the Indian sculptures, but properly that of the lightning. Legend: *Kelisila-jat, phurhālo Śakrā, 202*; "Kelisīla-jātaka, the Bodhisattva is Sakka." Phurhālo is an error for Phurhāloṅ; the form Śakrā shows the word is taken directly from Sanskrit Śakra; the Pāli being Sakka.

FIG. 36. KAṆAVERA-JĀTAKA—318.

(*Fausb. iii. 59.*)

The Bodhisattva is a robber; one day he is caught, beaten at all the cross-roads and led to execution.[1] A famous courtesan sees him, falls in love with him and bribes the officer of the law to set him free. The officer accepts and executes another man in his stead. The Bodhisattva lures her to the garden and in a *kaṇavera* (*Hibiscus rosa-sinensis*) bush, squeezes her till she swoons; he then takes all her ornaments and runs away.

The two trees represent the kaṇavera bush; the Bodhisattva is throwing the courtesan down and despoiling her; on the left, he carries away his booty. The inscription runs: *Kanavira-jat, sukhóv phrac i, 318*; "Kaṇavera-jātaka (the Bodhisattva) is a robber." Some Burmese editions read: Kaṇaviya-jātaka.

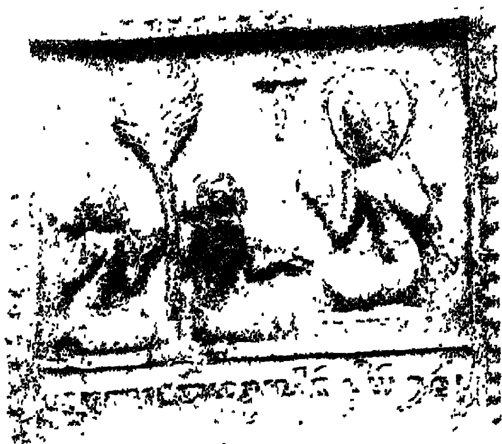
FIG. 37. GODHA-JĀTAKA—333.

(*Fausb. iii. 107.*)

A Benares prince and his wife are on their way home, hungry and thirsty, when some hunters see their distress and give them a roasted lizard. The lady carries it tied with a creeper; they come to a lake, the prince sends her to fetch water and meanwhile devours the whole lizard but the tail; when she comes back he tells her it has run away. "Ah! says she, what can one do with a roasted lizard that runs away?" When the prince becomes king, he makes her queen consort, but no honour is paid to her, for the king, as when he was only a prince, wants everything for himself. The Bodhisattva, who is his minister, resolves to make her have her due, and in a conversation with the queen, in front of the king and in the midst of the courtiers, they both put the king to shame by recalling the

[1] This punishment was still inflicted up to 1885, under the Burmese regime, sometimes for a trifling offence; the offender generally died before reaching the place of execution. This is a gruesome example of how deeply India influenced Burma in almost everyth'ng.

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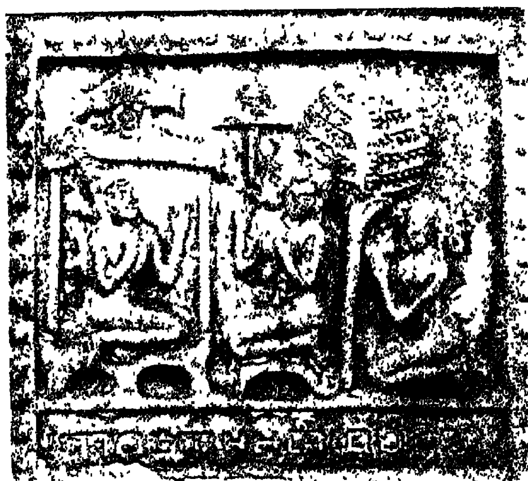
84. BANDHANĀGĀRA-JĀTAKA-201.



85. KELISĪLA-JĀTAKA-202.



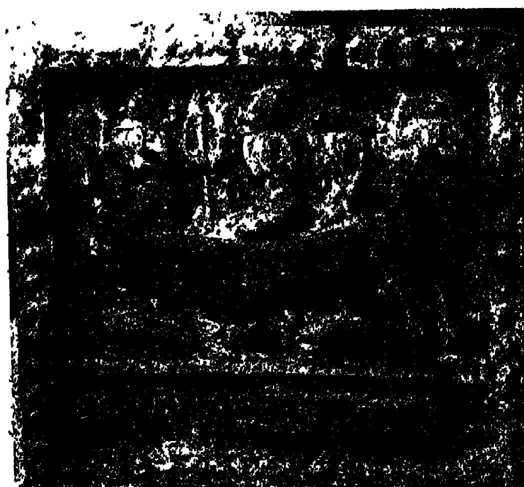
86. KAṆAVERA-JĀTAKA-318.



87. GODHA-JĀTAKA-333.



88. GANDHĀRA-JĀTAKA-406.



89. SAMUDDAVĀṆIJA-JĀTAKA-466.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

incident of the lizard. The king has his eyes opened, confers supreme power on the queen and great power on the minister.

On the left, the king on his throne; in front of him the Bodhisattva, with an umbrella over him; on the right, the queen; the tree is there to recall the episode of the roasted lizard in the jungle. Legend: *Godha-jat, amat phrac i, 333.* "The Bodhisattva is a minister."

FIG. 38. GANDHĀRA-JĀTAKA—406.

(*Fausb. iii. 364.*)

The Bodisattva is king of Gandhāra. He and the king of Videha are great friends, though they have never seen one another. The Bodhisattva becomes a hermit, induced thereto by the contemplation of an eclipse of the moon; the lord of Videha follows his example and subsequently they meet in the Himalaya wilderness and become very intimate. One day they quarrel over some trifle, but, owing to the wisdom of the Bodhisattva, they are at once reconciled, and both attain the highest spiritual faculties and are reborn in the Brahma world.

The name of the Jātaka and its number are quite clear in the legend: "*Gandhāra-jat; rasiy phrac i, 406.*" "Gandhāra-jātaka; (the Bodhisattva is) a rishi"; but the representation of the story is not in accordance with the jātaka. One would expect to see two rishis conversing in the wilderness; but here we have a rishi (the Bodhisattva, as shown by the umbrella) seated in his palace talking with two women; though no women are mentioned in the story. Apparently the artist has conceived of the king of Gandhāra taking leave of his wife before departing for the wilderness; the position of her right hand, placed open on the breast, seems to indicate this. The tree represents the Himalayas. In a Burmese work giving the names and numbers of the jātakas, and also describing minutely all the details of a pictorial representation of each jātaka, this story is rightly depicted: "The rishi-Bodhisattva and the other rishi seated at the foot of a tree; they are looking at the eclipse and conversing; above, in the sky, the eclipse." Such misconceptions of a story are not rare in the plaques of Pagan, but they are remarkably frequent in those of Maṅgalacetī; *cf.* on this point Grünwedel's *Glasuren aus Pagan.*

FIG. 39. SAMUDDAVĀṆIJA-JĀTAKA—466.

(*Fausb. iv. 159.*)

The Bodhisattva is a wise carpenter in a great carpenters' village near Benares in which live a thousand families. These carpenters take money in advance for work they never perform, and at last they are so deep in debt that they have to flee to some foreign part. They build a mighty ship and sailing in the ocean arrive at a certain island inhabited by goblins. In a drunken fit they all answer the call of nature everywhere and anywhere; the goblins are incensed and resolve to destroy the one thousand families. The Bodhisattva is the chief of five hundred of these, and a foolish carpenter, chief of the others; they are warned by a good deity who

advises them to flee. The Bodhisattva follows the advice and escapes in the boat with his 500 families; the foolish head carpenter prefers to enjoy life lazily on the island, and he and all his followers are destroyed.

The Bodhisattva is leaving the goblin-island in the ship. At the bow is a woman; in the middle, a man; these two represent the 500 families; between them is a mast; the Bodhisattva steers the boat at the stern; on shore, in a tree, the good deity warning them to depart. Two fishes are seen in the sea with a small rock between them. The legend runs: *Samun-dapāniya-jat-pe-thak-smā, 466*; "Samuddha-jātaka; (the Bodhisattva) is a steersman." The word "*smā*" so extensively used in Burmese after names of crafts to indicate a follower of such or such a craft, is a Talaing loan-word; it is the archaic form of the modern "*khmā*."

FIG. 40. TAKKA-JĀTAKA—63.

(*Fausb. i. 295.*)

The Bodhisattva is a hermit on the banks of the Ganges. The king of Benares has a daughter, a wicked and violent girl, who abuses and strikes her servants. One day, while bathing in the river, towards sunset, a storm bursts, the river swells, and left alone in it by her revengeful slaves, she is carried away by the current. The Bodhisattva sees her and saves her. She becomes his wife, and both leave the forest and dwell in a village. Robbers plunder the village and take the woman away, and she becomes the wife of the robber-chief. She is happy with the robbers and wants to get rid of the hermit; so she entices him into the robber-village and hides him in a room, then tells the chief of his presence, and the chief beats him unmercifully. The Bodhisattva bears all unflinchingly, repeating: "Cruel ingrate." The robber asks him why he keeps repeating this, and in answer the Bodhisattva recounts all that he has done for the princess. The robber, disgusted, pretends he is going to kill the ex-hermit outside the village and, making as if to kill the Bodhisattva, slays the treacherous woman. The Bodhisattva becomes again a hermit and the robber-chief follows his example.

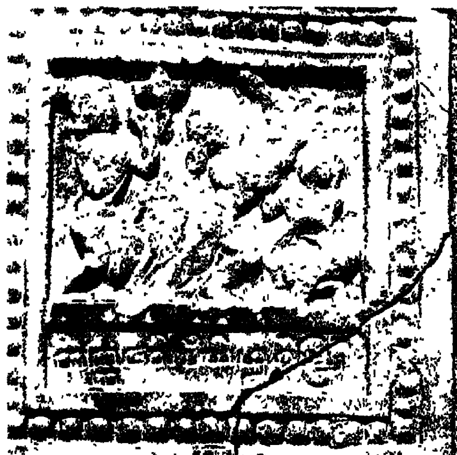
On the left, the Bodhisattva, designated as such by the umbrella; in the middle, the robber slaying the princess, who is crouching. Legend: *Takka jac; rasiy phrac ɪ*; "Takka-jātaka; (the Bodhisattva is) a hermit."

FIG. 41. MUDULAKKHAṆA-JĀTAKA—66.

(*Fausb. i. 303.*)

The Bodhisattva is a brahmin, and becomes a hermit in the Himalaya. He comes for condiments to Benares; the king sees him, is pleased with his demeanour, and begs him to stay in his pleasaunce. The hermit accepts, having all his needs carefully attended to. Sixteen years afterwards the king goes on an expedition. Accidentally, while coming for his meal, the hermit sees the queen, from whom her tunic has slipped, revealed in all her wondrous beauty; he is filled with lust, and refuses all food and drink and pines away in his hut. The king comes back, asks for explanations, and the hermit tells him everything. The king confers with

PICTORIAL REPRESENTATIONS OF JATĀKAS IN BURMA
NANDAWYE PAGODA, KYAUKSĪ.



40. TAKKA-JĀTAKA-63.



41. MUDULAKKHANA-JĀTAKA-66.



42. DUBBALAKAṬṬHA-JĀTAKA-105.



43. AMBA-JĀTAKA-124.



44. RĀDHA-JĀTAKA-145.

LITHOTYPE BY WALTER GRIGGS, LONDON W.C.

his queen, and she promises she will make him see the folly of his infatuation and bring him back to his senses. In this she succeeds, and the Bodhisattva goes back to the Himalayas.

On the left, the queen, and on the right, the king; they are conferring about the Bodhisattva, who is not to be seen in the plaque, but is represented by the umbrella; this is an interesting reversion to the Old Indian School, where the Buddha was represented only by a symbol and never under a human form. That the figure on the right is the king is clear from the inscription, which gives his designation; the queen is recognizable by her heavy chignon falling on the shoulder; an ascetic is always easily recognizable by his hair, which is made up into two knots on the sides of the head looking very much like horns, by his long pointed beard, and by the lines drawn on the chest and a hole at the pit of the stomach to represent emaciation; see, for instance, *fig.* 11, Pl. LI; *fig.* 34, Pl. LVI. Legend: *Mudulakkhaṇa-jac maṅ*; "*maṅ*" is the Burmese for "king".

FIG. 42. DUBBALAKAṬṬHA-JĀTAKA—105.

(*Fausb. i. 415.*)

The Bodhisattva is a tree-sprite near the Himalayas. The king of Benares makes an elephant over to trainers to be broken in. They tie him to a post and belabour him with goads. Smarting under the pain, the elephant breaks away and runs into the Himalayas; but there, the least noise frightens him. The tree-sprite points out to him how groundless is his fear. The elephant masters his fear, which he never feels any more.

Two distinct scenes are here represented; first, the elephant tied to a post and being trained and belaboured; then, the same elephant in the Himalayas being rebuked by the Bodhisattva; of the latter, the head alone can be seen in the middle of the tree. It will be remarked how conventional the tree is, but how faithful is the elephant's figure. The legend runs: *Dubbalakaṭṭha-jac; sacpaṅ nat phra*; "Dubbalakaṭṭha-jātaka (the Bodhisattva is) a tree-sprite;" "*phra*" is for "*phrac i*" *he is*; lack of room did not allow of the full word being written.

FIG. 43. AMBA-JĀTAKA—124.

(*Fausb. i. 450.*)

The Bodhisattva is a brahmin in the North of India, who becomes the chief of five hundred ascetics, and lives at the foot of the mountains. There is a great drought; all the water dries up and animals suffer cruelly. The Bodhisattva, full of compassion, cuts down a tree, hollows it into a trough, pours into it all the water he can find and gives it to the animals; but in doing so, he has to neglect his search for fruits for his own sustenance. The animals, grateful, bring him all kinds of fruits, mangoes, etc., enough to fill two hundred and fifty carts.

The ascetic is in his hut in the Himalayas; in front, is the trough, in which an animal, the head of which is half broken, is drinking; near this animal, a monkey holding a fruit in his left hand; on the eave of the hut, a bird; the umbrella has been placed over the bird instead of over the ascetic, probably for lack of room. It

is remarkable that the ascetic is not represented according to the conventional type (see explanation to *fig.* 41). The inscription reads: *Amba-jac*; *puṁnā rasiy phrac*; "Amba-jātaka; (the Bodhisattva) is a brahmin ascetic;" *cf. A S. R., 1906-07*, Pl. XLIII.

FIG. 44. RĀDHA-JATAKA—145.

(*Fausb. i. 495.*)

This jātaka is the same as No. 198 explained under *fig.* 25. The names of the two parrots are the same, but whereas in No. 198, Rādha is the Bodhisattva, in No. 145 the Bodhisattva is Poṭṭhapāda. The legend, following the Bodhisattva's name, calls this jātaka (No. 145) "*Potthapāda-jat*" and I think perhaps rightly so, although Fausböll's and Burmese editions call it Rādha, because it is one and the same story, the stanza only differing. The Burmese in the inscription is "*Kiy phrac i,*" (the Bodhisattva is) a parrot. "*Kiy*" is archaic for modern "*kyé*". Legend: *Poṭṭhapāta*. *Cf. fig.* 25, Pl. LIV.

FIG. 45. DEVADHAMMA-JĀTAKA—6.

(*Fausb. i. 127.*)

The Bodhisattva is the elder son of the king of Benares, his brother is Prince Moon. On their mother's death, the king marries again and has another son, Prince Sun. Owing to their stepmother's machinations the Bodhisattva and Prince Moon go to the Himalayas; Prince Sun insists on following them. In a pool lives a water-sprite, who has been given permission to devour all those caught by him who cannot say what it is to be "god-like." Prince Sun is caught, then Prince Moon, but the Bodhisattva saves them by defining what is "god-like."

The Bodhisattva stands in the middle of the plaque, with the umbrella before him; behind him Prince Moon; both are leaving for the wilderness; on the left Prince Sun begging of the Bodhisattva to let him accompany them. Legend: *Devadhamma-jac*; *phurhāloṅ maṅ phrac i*; "Devadhamma-jātaka, the Bodhisattva is king." "Is king" refers to the time when having returned from exile, the Bodhisattva succeeded to the throne. *Cf.* frescoes of Kubyauk-kyi, Pl. LX, *fig.* 3, 2nd of 1st row; and *A. S. R.*, 1906-07, Pl. XLII.

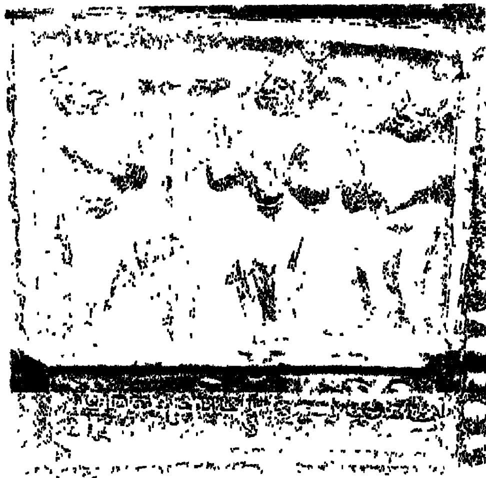
FIG. 46. SAKUṆA-JĀTAKA—36.

(*Fausb. i. 216.*)

The Bodhisattva is the chief of a flock of birds and lives on a giant tree. One day, smoke is produced by the friction and grinding of two branches, and the Bodhisattva warns the birds to flee before the conflagration; the wise follow his advice and fly away with him; the others refuse and are ultimately devoured by the flames.

On the left is the Bodhisattva with the umbrella over him; in the middle the giant tree, of a very conventional style; on the right, two birds, representing the whole flock. Legend: *Sakuna jac*; *ṅuṁ phra i*; "Sakuṇa-jātaka; (the Bodhisattva)

PICTORIAL REPRESENTATIONS OF JĀTAKAS IN BURMA.
SHWEZIGON PAGODA, PAGAN.



45. DEVADHAMMA-JĀTAKA-6.



46. SAKUṆA-JĀTAKA-36.



47. KHADIRAṄGĀRA-JĀTAKA-40.



48. AGGIKA-JĀTAKA-129.



49. UDAPĀNADŪSAKA-JĀTAKA-271.



50. BĀVERU-JĀTAKA-339.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

is a quail." The artist here has assumed the Bodhisattva was a quail, although he is simply called a "bird" in the story. "*Phra*" is an error for "*phrac*"; the mistake is due to negligence, for there was ample room to insert the final "*c*."

FIG. 47. KHADIRĀNGĀRA-JĀTAKA—40.

(*Fausb. i. 231.*)

The Bodhisattva is Lord High Treasurer in Benares. A *pratyeka* Buddha comes to his mansion for food just when breakfast is being brought to the Bodhisattva. Māra, to prevent the giving and receiving of alms, creates a large pit of fire in the house; but the Bodhisattva, nothing daunted, crosses over the pit without being harmed and gives food to the *pratyeka* Buddha.

The plaque is much weathered at places and covered with thick glaze at others, so that it is not easy to distinguish the two personages on the right and left. They are, on the left, the Bodhisattva, holding something in his hand, namely, his offering to the *pratyeka* Buddha; in the middle, on a kind of throne, the latter seated with his legs in the *dhyāna mudra*; he is covered by an umbrella which should have been placed over the Bodhisattva; on the right, Māra. The legend reads: *Khatiraṅka-jac*; *seṭṭhiy phrac*; "Khadiraṅgāra-jātaka; (the Bodhisattva) is Lord High Treasurer;" *cf.* Grünwedel's *Glasuren aus Pagan*, p. 23, *fig.* 32.

FIG. 48. AGGIKA-JĀTAKA—129.

(*Fausb. i. 461.*)

The Bodhisattva is the king of the rats, and dwells in a forest. A jackal is caught in a jungle-fire and all his hair is singed off, but for a tuft on the top of the head, like that of a monk. He comes to the rats' cave and takes his stand near by, facing the sun and standing on one leg, to make believe he is a holy creature. The rats believe him; but every evening when they come back to the cave, he eats the hindmost. The Bodhisattva discovers his trick and the rats spring upon him and kill him.

In the right hand corner, below, is the jackal; three rats, representing the whole swarm, are springing at him; nothing distinguishes the Bodhisattva, but it is probably the lower rat on the left, jumping at the jackal's throat. It will be remarked how poorly the animals are modelled. Legend: *Aktika*; *krvak phrac*; "Aggika-jātaka; (the Bodhisattva) is a rat." The word "*jac*"=*jat*=*jātaka* is missing after *Aktika*, owing to lack of room. With this story, compare story No. 128, Biḷāra-jātaka.

FIG. 49. UDAPĀNADŪSAKA-JĀTAKA—271.

(*Fausb. ii. 354.*)

The Bodhisattva is the head of a number of ascetics at Isipatana, near Benares. A jackal comes, drinks at the well and fouls the water. The ascetics catch him and bring him before the Bodhisattva, who admonishes him severely. The jackal runs away and never even as much looks at the well again.

No jackal is shown in the plaque. Two ascetics, with their typical hair, are seen conversing; the one on the right with his hand touching the umbrella, is the Bodhisattva; the other is telling him of the jackal's deed. Legend: *Udapānatusa-cac; rasiy phrac*; "Udapānadūsaka-jātaka; (the Bodhisattva) is an ascetic." The form "*cac*" for "*jac*" is one of those errors due to negligence so frequent on the plaques of the Shwezigon of Singaing.

FIG. 50. BĀVERU-JĀTAKA—339.

(*Fausb. iii. 126.*)

This story has been explained under *fig.* 21, Pl. LIII. In the present picture, a woman is worshipping the peacock, while in that of the Pagan Shwezigon she is, more in accordance with the story, offering him food. The umbrella should be near the peacock, for it is the Bodhisattva. Legend: *Pāveru-jac; utoṅ phrac i* "Bāveru-jātaka; (the Bodhisat) is a peacock." "*Utoṅ*" is for "*udoṅ,*" peacock. *Cf. fig.* 21, Pl. LIII.

FIG. 51. MANDHĀTU-JĀTAKA—258.

(*Fausb. ii. 310.*)

This jātaka has been explained under *fig.* 2, Pl. L. Here, Mandhāta is passing away in his park, lying on a couch; he wears a rich loin-cloth and necklace; the hat is that worn at the court by kings; near the couch is a minister, in a long gown. All these dresses seen in the plaque of the Pathodawgyi were worn during the last century up to 1885, the year of the annexation of Upper Burma. They are still seen at puppet shows and theatres. *Cf. fig.* 2, Pl. L.

FIG. 52. KAKKAṬA-JĀTAKA—267.

(*Fausb. ii. 341.*)

This story has been explained under *fig.* 4, Pl. L. In the present plaque the lake can be seen with the crab in it. The elephants are beautifully carved; the body only has been painted, leaving the head white, to show that the Bodhisattva and his mate were white elephants. The crab is very true to nature, and better than that seen in *fig.* 4, Pl. L.

FIG. 53. ULŪKA-JĀTAKA—270.

(*Fausb. ii. 352.*)

The Ulūka-jātaka has been explained under *fig.* 5, Pl. L. In the present plaque, we have a very graphic representation of this birth-story; it will be seen how beautifully the birds are made and the vast interest they seem to take in the quarrel between the crow and the owl. See also *fig.* 20, Pl. LIII. Legend: *Uluga-jāt.*

FIG. 54. UDAPĀNADŪSAKA-JĀTAKA—271.

(*Fausb. ii. 354.*)

This jātaka has been explained under *fig.* 49, Pl. LVIII. The present representation is more in accordance with the story. Under the tree, the Bodhisattva is



51. MANDHĀTU-JĀTAKA-258.



52. KAKKATA-JĀTAKA-267.



53. ULŪKA-JĀTAKA-270.



54. UDAPĀNADŪSAKA-JĀTAKA-271.



55. SATAPATTA-JĀTAKA-279.



56. NĀNACCHANDA-JĀTAKA-289.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

listening to the account given of the jackal's deed by two of his disciples; the guilty jackal is listening to the Bodhisattva's admonition. In the plaques of the Patho-dawgyi, the shackles of the old Indian tradition have been to a very great extent cast off and the conceptions have become purely Burmese. It will be remarked that the three ascetics are dressed in the common monkish garb; they have no beard and the hair is not made up into a double top-knot, one on each side on the summit of the head, as is the case in other plaques. *Cf. fig.* 49, Pl. LVIII.

FIG. 55. SATAPATTA-JĀTAKA—279.

(*Fausb. ii. 387.*)

The Bodhisattva is the chief of a band of five hundred robbers. A sick mother sends her son to recover a thousand pieces of money due to her; he goes and gets the money; but while on his way back, the mother dies and becomes a jackal; she goes to him and tells him not to enter the forest, as there are robbers there; he does not understand, but thinks the animal is one of ill omen, and enters the forest. An old enemy of his, reborn as a crane, sings out "Kill him and take away his money"; the man does not understand, but thinking the bird one of good omen, asks it to go on repeating that. The Bodhisattva knows and understands everything. He catches the man, explains to him in what relations he stands to the bird and the jackal, gives him warning to be more careful in future and sets him free with his money.

On the left, the son, with his mother-jackal in front of him; above, on a tree, the bird; on the right, the Bodhisattva with a sword at his side; *cf.* Grünwedel's *Glasuren aus Pagan, fig.* 60, p. 78.

FIG. 56. NĀNACCHANDA-JĀTAKA—289.

(*Fausb. ii. 427.*)

The Bodhisattva is king in Benares. Walking incognito in the city at night, he is knocked down by robbers. An old family chaplain, who had been cashiered during his father's reign, is observing the constellations in the street; he is heard by the king to say they are unlucky. The king's own priests at the palace thought they were lucky. The king is released almost at once, and on reaching the palace, he dismisses the ignorant priests, and gives back his office to the old one.

The king is on his throne in full regal dress, dismissing the Brahmin priests, two of whom are crouching before him. The legend reads: *Nānāchanda, 289. Cf. A. S. R.*, 1906-07, Pl. XLV.

FRESCOES FROM THE KU-BYAUK-KYI PAGODA, PAGAN, (Pl. LX).

Fig. 1. Remains of the frescoes on the south wall. The legends are given for each row successively from left to right, the titles of the stories in Fausböll's edition are not repeated, unless those of the frescoes differ in spelling or otherwise from them. The quotations refer by volume and page to Fausböll's edition.

1st row.

For Nos. 4, 5, 6, see *fig*. 3, 1st row.

For the first three jātakas, see *fig*. 2, 1st row.

7. *Kaṭṭhahāri-jat ; thaṅ khuy sā, 7 ;* (the Bodhisattva is) a wood-cutter ; 1, 133.
8. *Gāmaṇi-jat ; purhāloṅ amat, 8 ;* the Bodhisattva is a minister ; 1, 136.
9. *Maghadeva-jat ; maṅ rasiy phrac i, 11 ;* Makhādeva-jātaka, the king (Bodhisattva) becomes an ascetic ; 1, 137.
10. *Sukkhavihāri-jat ; puṁnā rasiy, 10 ;* Sukhavihāri-jātaka, (the Bodhisattva is) a brahmin ascetic ; 1, 140.
11. *Lakkhaṇa-jat ; purhāloṅ samaṅ, 11 ;* the Bodhisattva is a deer ; 1, 143.

2nd row.

For Nos. 1, 2, 3, see *fig*. 2, 2nd row.

For Nos. 4, 5, 6, see *fig*. 3, 2nd row.

7. *Vattaka-jat ; ṅuṁ phrac i, 35 ;* Vaṭṭaka-jātaka, (the Bodhisattva) is a quail ; 1, 213.
8. *Saguṇa-jat ; ṅhak phrac i, 36 ;* Sakuṇa-jātaka, (the Bodhisattva) is a bird ; 1, 216.
9. *Tittira-jat ; khā phrac i, 37 ;* (the Bodhisattva) is a partridge ; 1, 218.
10. *Baka-jat ; sacpaṅ nat, 38 ;* (the Bodhisattva is) a tree-sprite, 1, 221.
11. *Nanta-jat, sukrvay, 39 ;* Nanda-jātaka, (the Bodhisattva is) a wealthy man ; 1, 224.

3rd row.

For Nos. 1, 2, 3, see *fig*. 2, 3rd row.

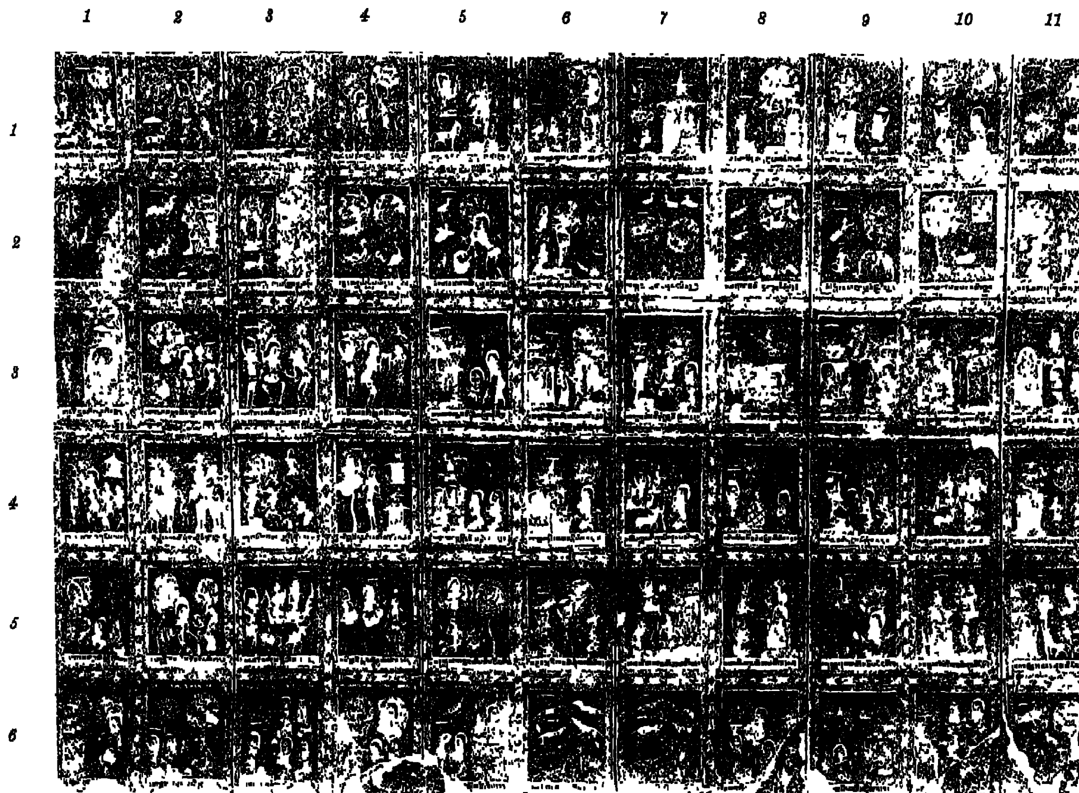
For Nos. 4, 5, 6, see *fig*. 3, 3rd row.

7. *Tagga-jat ; rasiy phrac i, 63 ;* Takka-jātaka, (the Bodhisattva) is an ascetic ; 1, 295.
8. *Du[raj]āna-jat ; disābrāmók phrac i, 64 ;* (the Bodhisattva) is a far-famed teacher ; 1, 299.
9. *Anabhirati-jat ; disabrāmók, 65 ;* (the Bodhisattva is) a far-famed teacher ; 1, 301.
10. *Mudulakkhaṇa-jat ; puṁnā rasiy, 66 ;* (the Bodhisattva is) a brahmin ascetic ; 1, 303.
11. *Uccaṅga-jat ; maṅ, 67 ;* Ucchaṅga-jātaka, (the Bodhisattva is) king ; 1, 307.

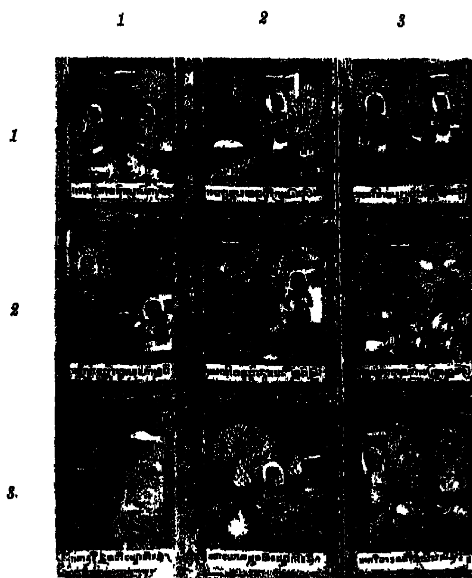
4th row.

1. *Kha[ra]saṇa-jat ; kun sañ, 79 ;* Kharassara-jātaka, (the Bodhisattva is) a merchant ; 1, 354.
2. *Bhimmasena-jat ; puṁnāmyov mrāsmā, 80 ;* Bhimasena-jātaka, (the Bodhisattva is) a brahmin archer ; 1, 356.
3. *Surāpāṇa-jat ; rasiy, 81 ;* Surāpana-jātaka, (the Bodhisattva is) an ascetic ; 1, 361.
4. *Mittavinda-jat ; nat-sā, 81 ;* (the Bodhisattva is) a deva ; 1, 363.
5. *Kalaganni-jat ; satthiy, 83 ;* Kālakaṇṇī-jātaka, (the Bodhisattva is) a Royal Treasurer ; 1, 365.

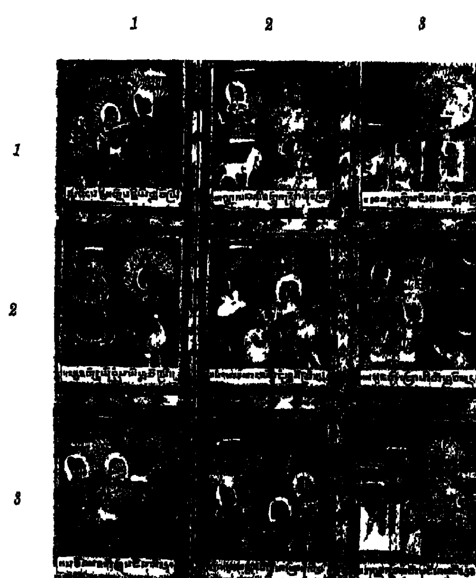
PICTORIAL REPRESENTATIONS OF JĀTAKAS IN BURMA.



57.



58.



59.

57, 58 & 59. FRESCOES FROM THE KUBYAUKKYI PAGODA, PAGAN.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

6. *Atthassadvara-jat ; satthiy, 84 ;* (the Bodhisattva is) a Royal Treasurer ; 1,366.
7. *Kimpaka-jat ; Lhan-kun sañ, 85 ;* (the Bodhisattva) trades by means of carts ; 1, 368.
8. *Sīlavimaṁsa-jat ; prohit, 86 ;* Sīlavimaṁsa-jātaka, (the Bodhisattva is) a royal chaplain.
9. *Maṅgala-jat ; pumnā rasiy, 87 ;* (the Bodhisattva is) a brahmin ascetic ; 1, 370.
10. *Sārambha-jat ; nvālā, 88 ;* (the Bodhisattva is) a bull ; 1, 374.
11. *Kuhaka-jat ; paññahisasū, 89 ;* (the Bodhisattva is) a clever man.

5th row.

1. *Parosata-[ja]t bruhmā, 101 ;* (the Bodhisattva is) Brahma ; 1, 410 ; it is the same story as 1, 405, (Parosahassa-jātaka), where the story is told in full. Note the three heads of the Bodhisattva.
2. *Paṇṇika-jat ; sacpaṅ nat, 102 ;* (the Bodhisattva is) a tree-sprite ; 1, 411.
3. *Veri-jat ; seṭṭhiy, 103 ;* (the Bodhisattva is) a very wealthy man ; 1, 412.
4. *Mittavinta-jat ; natsā, 104 ;* Mittavinda-jātaka, (the Bodhisattva is) a tree-sprite ; 1, 413.
5. *Dubbalakaṭṭha-jat ; sacpaṅ nat ;* (the Bodhisattva is) a tree-sprite ; 1, 415. The forest scene, in which the tree-sprite rebukes the elephant for his timidity, is quaintly represented by placing the elephant on the tree.
6. *Udañcanila-jat ; puṁnā rasiy ;* Udañcani-jātaka, (the Bodhisattva is) a brahmin ascetic ; 1, 416.
7. *Sālitaka-jat ; amat, 107 ;* Sālittaka-jātaka, (the Bodhisattva is) a minister ; 1, 418.
8. *Bāhiya-jat ; amat, 108 ;* (the Bodhisattva is) a minister ; 1, 421.
9. *Kuṇḍapuva-jat ; sacpaṅ nat ;* Kuṇḍakapuva-jātaka, (the Bodhisattva is) a tree-sprite.
10. *Sabbasāhārika-jat ; sukhamin ;* Sabbasaṁhāraka-jat, (the Bodhisattva is) a learned scholar.
11. *Katrabha-jat ; sukhamin, 111 ;* Gadrabha-jātaka, (the Bodhisattva is) a learned scholar.

6th row.

The legends in this row have almost completely disappeared ; those that have been completely restored are distinguished by an asterisk *.

1. *Naṅgalisa-ja[t ; disābram]ôk ;* Naṅgalīsa-jātaka, (the Bodhisattva is) a far-famed teacher ; 1, 446.
2. *Am[ba]-jat ; Puṁnā rasiy ; 124,* (the Bodhisattva is) a brahmin ascetic ; 1, 450.
3. *Kaṭaha(ka-jat ; satthiy, 125] ;* (the Bodhisattva is) a millionaire ; 1, 451.
4. *[Asilakkhana-jat ; maṅ ; 126] ;* (the Bodhisattva is) a king ; 1, 455.
5. *[Kalaṇḍuka-ja]t ; setthiy, 127 ;* (the Bodhisattva is) a millionaire 1, 458.

6. *Bilara-jat; [Krva]k, 128;* Biḷāra-jātaka, (the Bodhisattva is) a rat 1, 460.
7. *Aggikabhāradvāra-jat; krvak;* Aggika-jātaka, (the Bodhisattva is) a rat; 1, 461. For *bhāradvāra* read: *bhāradvāja; 'aggikabhāradvāja* is the name of this story in most Burmese editions or translations of the jātakas; *cf.* Ekanipat Jāt Vatthu, page "ca", Hanthawaddy Press, Rangoon, 1906. It will be remarked that the fresco for this and the preceding story (Biḷāra) is the same.
8. *Kosi[ya-jat; disābrāmók];* (the Bodhisattva is) a far-famed teacher; 1, 463.
9. *[Asam] padāna-jat; satthiy, 131;* (the Bodhisattva is) a rich man; 1, 466; "saṭṭhiy" is an error for "seṭṭhiy"=Pāli: seṭṭhi.
10. * *[Pañcagaru-jat; maṅ sā, 132];* (the Bodhisattva is) a prince; 1, 469.
11. * *[Ghatāsana-jat; ṅhak, 133];* (the Bodhisattva is) a bird; 1,471.

Fig. 2.

1st row.

1. *Apannaka-jat; Lhañ kun sañ;* Apaṇṇaka-jātaka, (the Bodhisattva is) trading with carts; 1, 98.
2. *Vaṇṇapatha-jat; Lhañ kun sañ;* 1, 107 (Vaṇṇupatha).
3. *Serivā-jat; purhāloṅ rvay sañ;* the Bodhisattva is a hawker; 1, 111.

2nd row.

1. *Gaṇha-jat; nvālā-nak;* Kaṇha-jātaka, (the Bodhisattva is) a black bull; 1, 193.
2. *Maṇiga-jat; nvālā-(n)i phrac i;* Muṇika-jātaka, (the Bodhisattva is) a red bull; 1,196.
3. *Kulāvaka-jat; Sakrā phrac i;* (the Bodhisattva) is Cakra; 1, 199.

3rd row.

1. *Vānarinda-jat; myok, 57;* (the Bodhisattva is) a monkey; 1, 278.
2. *Toyodhamma-jat; myok, 58;* (the Bodhisattva is) a monkey; 1, 280.
3. *Bherivāda-jat; cañ sañ, 59;* (the Bodhisattva is) a drummer; 1, 283.

Fig. 3.

1st row.

1. *Cūlaseṭṭhi-jat; seṭṭhiy phrac i, 4;* Cullaseṭṭhi-jātaka; (the Bodhisattva) is a Lord High Treasurer; 1, 120.
2. *Taṇḍulanāli; kun-aphóv phrat;* (the Bodhisattva is) an appraiser; 1, 124.
3. *Devadhamma-jat; maṅ-sā maṅ phrac i;* the prince (=Bodhisattva) becomes king; 1, 127; *Cf.*

2nd row.

1. *Najja-jat; rhvay vaṁ-pay, phrac i, 32;* Nacca-jātaka, (the Bodhisattva) is a golden goose; 1, 207.
2. *Saṁmodamāna-jat; ṅuṁ phrac i, 33;* Sammodamāna-jātaka, (the Bodhisattva) is a quail; 1,208.

3. *Maccha-jat; prohit phrac, 34;* (the Bodhisattva is) a purohita (family chaplain) ; 1, 210.

3rd row.

1. *Saṅkhadhama-jat ; khru-ṣaṅ saññ, 60* (the Bodhisattva is) a conch-blower ; 1, 284.
2. *Asātamanta-jat ; disā-brāmók, 61;* (the Bodhisattva is) "disāpāmokkha" (ācariya) = a far-famed teacher ; 1,285. The form "brāmok" is interesting in that it shows the word is derived from the Pâli, and not the Sanskrit; the "*b*" for a "*p*" points to a Talaing influence.
3. *Aṇḍābhūta-jat ; maṅ-sā maṅ, 62 ;* the prince (= Bodhisattva becomes) king ; 1, 289.

CHAS DUROISELLE.

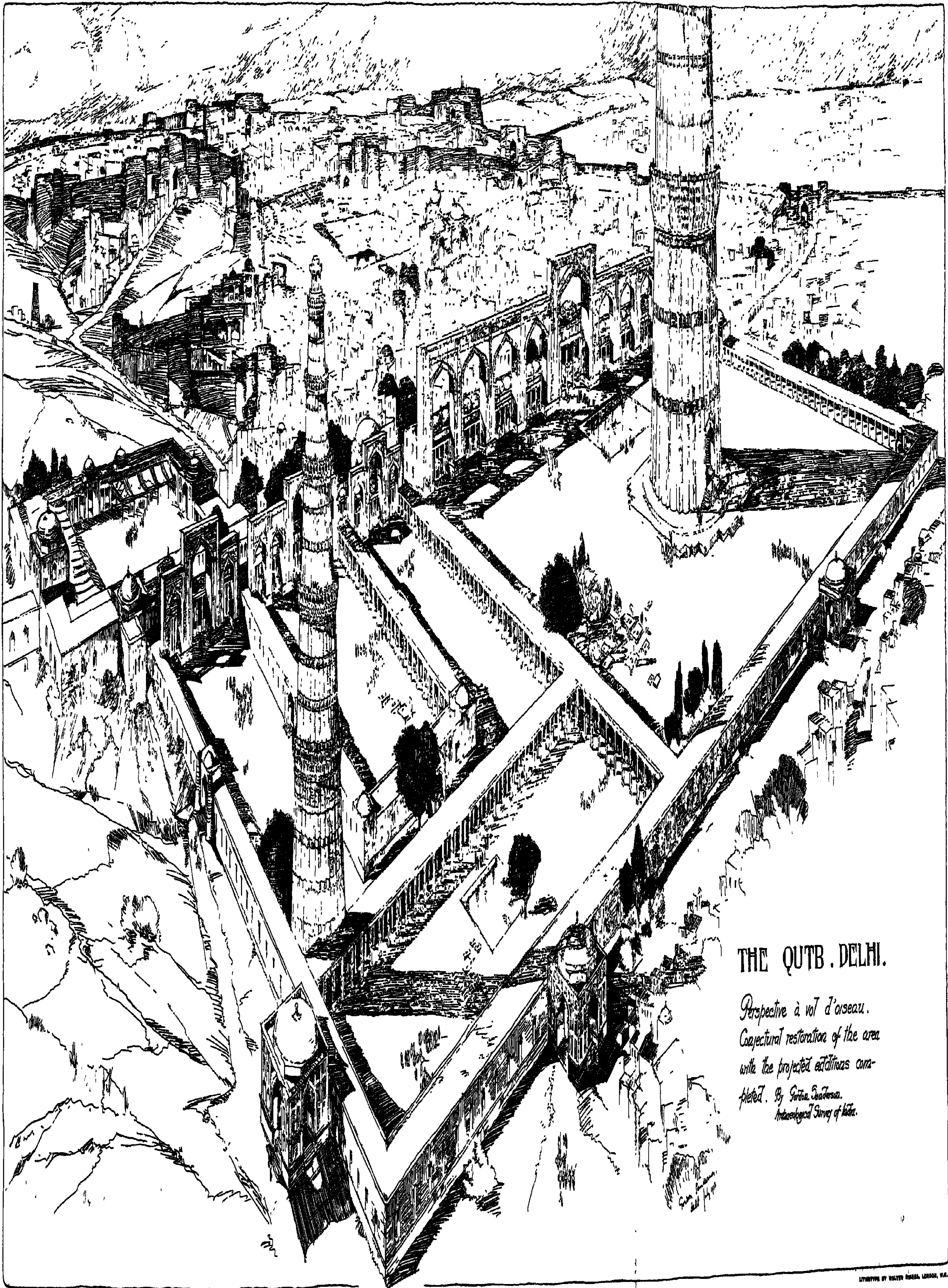
ARCHÆOLOGICAL WORK AT THE QUTB, DELHI, 1912-13.

THE character of the Moslem nations has at all times presented strange paradoxes. Just as in Egypt the Mamlûk Sulṭāns combined their passion for war with the love of the beautiful, so in India, the dynasty of the Slave kings, of whom the first and most mighty was Quṭbu-d-dīn Aibak, although merciless to their enemies, tyrannous to their subjects, and barbarous in many other respects, nevertheless delighted in the refinements of art and have seldom been rivalled in the magnificence of their architecture. In the Quṭb Mīnār, and the buildings that surround its base, they have left an eloquent record of the power of Islām and of their fondness for building; while the date at which these buildings were erected, and the circumstances in which they came into being, invest them with a value and interest which it is hardly possible to exaggerate. The determination of these first Sulṭāns of Delhi to "make their mark" and to spread the message of Islām and of their own conquering might to the people of Hindustān, could scarcely have found clearer expression than it did in the building of the famous *mīnār*, with its stupendous shaft towering to heaven and its verses glorifying God and the Emperor blazoned around its walls in clear bold lettering for all to see.[1] A fine conception, this vast and richly chiselled pillar, and he is of dull imagination who cannot picture for himself the character of the man who conceived it!

Following Quṭbu-d-dīn as builders came Shamsu-d-dīn Altamish and 'Alāu-d-dīn Khaljī, both strong men, but not of his calibre; and then the history of this remarkable group of buildings comes to an end, save for some repairs carried out to the *mīnār* and other buildings by the peace-loving Fīroz Shāh Tughlaq, and Sikandar Shāh, second king of the short-lived house of Lodī.

Much has been written of the Quṭb, and these notes will deal only with some new features of special interest, which have resulted from the work done during the winter of 1912-13. To understand old Delhi aright one must go over the ground time and again—inch by inch as it were and stone by stone—and try to revisualise its seven former cities peopled and stirred by the movings of a great empire. Till

[1] The inscriptions are to be published shortly in the Epigraphia Indo-Moslemica.


THE QUTB . DELHI.
Perspective à vol d'oiseau.
Conjectural restoration of the area
with the projected additions com-
pleted. By Gordon Sanderson.
Archaeological Survey of India.

recently, the buildings at the Quṭb have suffered much from the misleading nature of their surroundings, many of the remains which might have led to a clearer comprehension of the site having remained buried, while part of the precincts, including the great northern mosque court of 'Alāu-d-dīn, being utilised for the raising of such poor and scanty crops as they would yield. Heedless of all sentiment for past associations, a road had been constructed through the centre of the group of monuments, passing over an entire colonnade, and roughly thrusting its way past the tomb of Altamish. Sir Thomas Metcalfe, with every good intention, laid out the surroundings in erroneous paths and plots as an adjunct to his country residence, the erstwhile tomb of Muḥammad Qūli Khān, one of the foster brothers of the great Akbar. Mounds were built by him at various points from which to view the ruins to the best advantage, and, constructed as they were of old materials, they have led many to suppose that they are actually the relics of an ancient time. Graves appeared at random in the ground reserved by right for the saints of Delhi and for the priests of the Mosque of the Might of Islām; so that now the bodies of men, revered in former centuries by both the Sulṭān and his subjects, lie side by side with the deceased relatives of the servants of the neighbouring *dāk*-bungalow. Year by year, the number of tourists and visitors increasing, a small colony of buildings with the necessary menials, cattle, and poultry attendant thereon, had grown up, and the front of the area had become almost entirely obscured by them. The first step in the improvement scheme was the removal of the Delhi-Gurgaon road to the outside of the confines of the area. This was carried out in 1910, the road being diverted to a point north of the unfinished *mīnār* of 'Alāu-d-dīn. In the winter of 1911 as much was done as funds allowed in the way of exposing the more important portions of the area which had hitherto been buried: the chief piece of work being the removal of earth and débris from the northern mosque chamber of Altamish (see Pl. LXIII *a*). Tentative excavations were also carried out to enable the future scheme of improvement to be determined. This was to comprise the entire removal of all modern buildings, walls, and misleading paths within the area, and the exposure to the originally intended level of all the buried masonry. The area was to be laid out in lawns and shrubberies, marking the position of former courts and colonnades respectively; paths were to be put down in keeping with the former arrangement of the buildings and to enable the ruins to be seen to the best possible advantage; and the access roads were to be realigned to facilitate the ever-growing carriage traffic bringing visitors from Delhi. The work was started in November, 1912, and was completed by March, 1913, with the exception of grassing, planting and the metalling of the new access roads.[1]

Considering the large area over which the work of improvement was going on, and the enormous quantities of earth and débris which were removed, but little came to light in the nature of antiquities, and the only find of any great interest was a small hoard of some ten silver coins of the reign of Altamish, found near the north wall of the northern mosque chamber added by this Sultān.

In 1871 and 1872 excavations were carried out at the Quṭb by Mr. J. D.

[1] For details and cost see *Annual Progress Report of Superintendent, M. and B. Monuments, N. Circle, Agra*, 1912-1913.

Beglar of the Archæological Department, under the direction of General Cunningham, and it was found that, in certain places on the outside walls of the mosque, there existed two bands of a "double cornice" of a peculiar design, which General Cunningham and his assistant pronounced as original Hindū work.[1] These bands have now been traced to their full extent and exposed as far as is compatible with the safety of the masonry near them. The whole of the cornice, on the west wall of the mosque, has been exposed to view, the ground having been cut away at this point and a masonry-lined drain constructed, so as to render the base of the wall immune from damage by water (see Pl. LXIII *b*). On the other walls of the mosque the lower band of the "double cornice" is hidden under the pavement levels of the various courtyards, which formed part of the extensions of Altamish, a fact showing that this Sulṭān considerably raised the general levels of the ground occupied by his additions. Similarly, the lower band of the cornice is hidden on the east wall, and an examination of the east entrance to the mosque revealed the level of the old entrance, as made by Quṭbu-d-dīn, at a depth of two steps below the level of the entrance to the mosque as made by Altamish. On the other hand, it does not seem as if the level of the entrance of Quṭbu-d-dīn was that of the original Hindū temple ; for, in front of the entrance and at a point in the centre of the colonnade erected to the east of the mosque by Altamish, an examination of the ground to a depth of some 15 feet revealed nothing but filling composed of huge stones. The level reached, even at this great depth, was certainly not the natural and original one, and it would appear as if some huge depression, or perhaps a tank, had been filled up by the Muhammadan builders so as to provide a level forecourt to the mosque. Similarly, rubble filling to this great depth was found at the north-west outer corner of the mosque, and the lowest course of the original Hindū wall was found some 7 feet below the floor of Altamish's northern mosque compartment. The filling, as before, was composed of huge stones and was only removed with great difficulty. It is interesting to note that Altamish and 'Alāu-d-dīn followed the idea of the double cornice, though they used one band only, as is apparent on the outer walls of their extensions on the south and east (Pl. LXIV *a*).

Low down in the face of the north-west outer corner of the mosque Mr. Beglar found an opening which he thought might have led to some subterranean chambers, but he did not examine it. A trial pit was accordingly sunk, directly above it in the corner of the mosque compartment of Quṭbu-d-dīn ; but here, as elsewhere, filling of huge rubble stones was encountered under the pavement of the mosque and there was no trace of any structure below the level of the present pavement. This opening, and the others made at various points, have had to be closed owing to the danger of water collecting in them. It seems certain however that the original level of this portion of the area, as first built upon by the Hindūs, lies some twenty feet, or even more, below the level of the inner courtyard of the mosque. What exists in this space can only be determined by further investigation and the centre of the courtyard might be opened with this end in view.

The removal of the Delhi-Gurgaon road disclosed the exact position of the northern colonnade of Altamish. Its floor remained, though broken in places, while

[1] See *A. S. R.*, Vol. II (1871-1872).



a. THE NORTHERN MOSQUE CHAMBER.



b. THE "DOUBLE CORNICE" ON THE WEST WALL OF THE MOSQUE OF QUTBU-D-DIN AIBAK.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

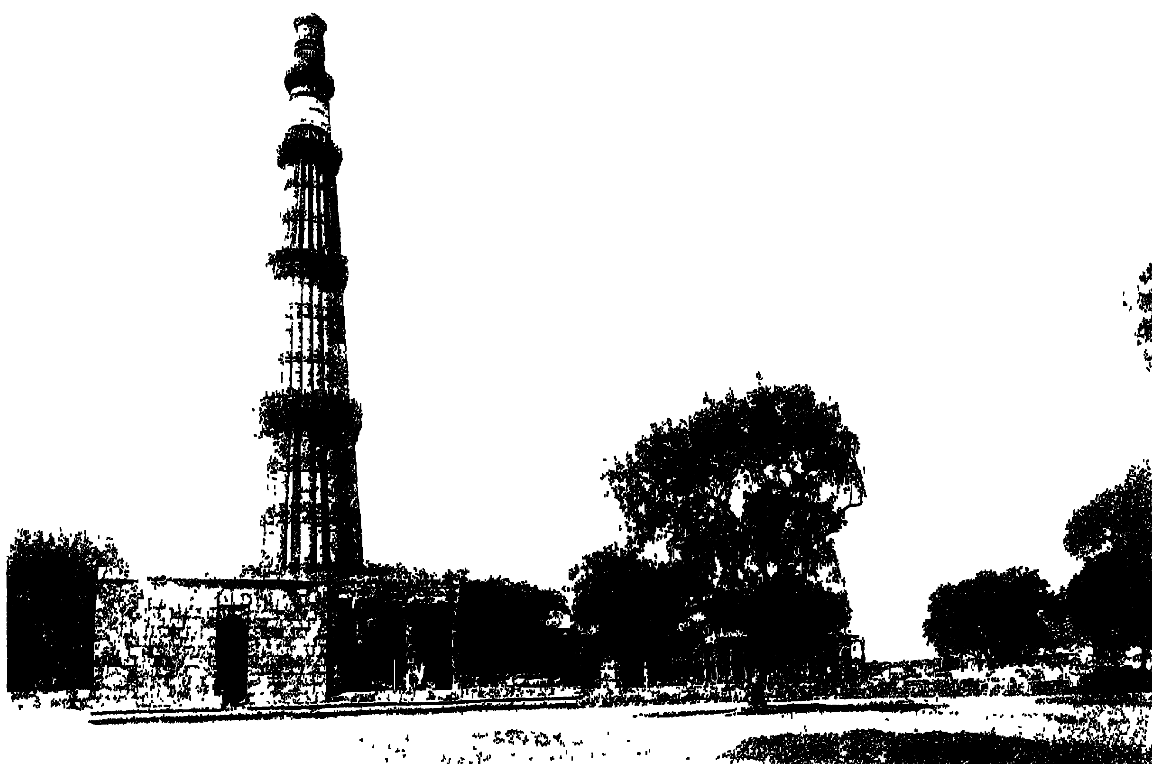
the stone slabs, placed as foundations for the bases of the columns, remained in almost every case. None of the bases were found *in situ*, but many of them were lying buried in the ground near by (see Pl. LXIV*b*). The reasons for the almost entire disappearance of this colonnade must be left to the imagination. It seems not improbable that it was removed to make way for the road to Mehrauli, which probably dates from the early years of the 19th century, Mehrauli being frequently visited by the last king of Delhi, and he had, in fact, a palace there. The upper part of the colonnade probably collapsed through faulty construction; for an inspection of its counterpart, which still exists to the south and east of the mosque, shows that the latter can hardly be considered as good building. The columns are somewhat slender for the weight of the roof, while there are no lateral supports. Again, the southern gateway has gone, with the exception of the two piers (see Pl. LXV), and what is left shows that, like the greater part of the masonry elsewhere, it was but a rubble core veneered externally with dressed stones. It is to be feared that here, as in much of the early work in England, the builders firstly considered effect, andnot solidity of construction, and were inclined to pay but little attention to the core of their masonry. Had they done so, the architecture both in India and England, and for that matter in many other countries, would be considerably richer in its possession of examples of old work than it is to-day. At the Quṭb the contrast between the care and thoroughness of what little Hindū work is left and the evidently hurried execution of the Muhammadan work is very marked. On the other hand, the masonry of the Quṭb Mīnār, which was, most probably, carried out entirely by the Hindūs working under their new masters, is an exception to that of the remainder of the buildings of the area, which are obviously the handiwork of a race of conquerors, who, though delighting in the art of architecture, nevertheless wished to "run up," if one may use the term, pretentious buildings as quickly as possible, so that no time might be lost in making an impression on their newly conquered subjects.

The entrances of the various colonnades, even though the work of different periods, are planned on the "axial" system characteristic of Muhammadan architecture. Thus, the entrance through the northern colonnade of Altamis͟h was placed at a point opposite the corresponding northern entrance to the Mosque of Quṭbu-d-dīn, the existence of the former being proved by the discovery of some threshold stones, well worn on their outer edge by constant use. But this gateway does not seem to have been of the same imposing proportions as the one in the corresponding colonnade to the south; for no traces of the circular piers, which are a characteristic feature of the latter, are to be found. The northern entrance of Altamis͟h's northern court seems to have been merely an unpretentious opening in the colonnade, the outer edges of which were provided with the necessary threshold stones. Thus, from the unimportant character of this entrance and the lack of finality in its design, one may suppose, either, that extensions in a northerly direction were actually meditated by Altamis͟h, the uneven nature of the ground to the south precluding any idea of extension in that direction; or, on the other hand, that the main approach to the mosque, and that most frequently used, was to the south. In this connexion, it may be noticed that opposite the entrance of the mosque of Quṭbu-d-dīn, and on the east edge of Altamis͟h's colonnade at this point, well worn threshold stones were found

similar to those referred to above, and evidently marking the position of a former gateway, of secondary importance. So that, as has been already suggested, Altamish may have left clear indication to 'Alāu-d-dīn that a further extension to the east as well as to the north was a possibility.

The question also presents itself, whether Altamish intended to have any openings in his outer colonnades at all. For, judging by the nature of the stones that remain, they might quite well be the work of either Emperor, and the openings may have been made in the colonnade by 'Alāu-d-dīn to give access to his extensions on the north and east. It may be argued, and with much weight, that the important character of Altamish's southern entrance, as well as the prominence given by 'Alāu-d-dīn to his 'Alāi Darwāza, point to the south as being the principal quarter from which the faithful entered the precincts of the mosque, a theory which is borne out by the fact that to the south lay the greater portion of the city, as well as the burying place of numerous saints of this period. How much of the old ramp outside the southern wall of the enclosure, and leading up to these gateways, is original work and how much of it is Sir Thomas Metcalfe's, is hard to say. It seems not unlikely, however, as the steps of the 'Alāi Darwāza indicate, that a considerable number of people entered from this direction. Against this argument, however, for the southern entrance being the principal one, the east entrance to the mosque as built by Quṭbu-d-dīn Aibak is in weighty opposition. Projecting as it does from the main wall face of the mosque, and recording on its arches the achievements of its builder, it seems to have been intended by Quṭbu-d-dīn to serve as the principal entrance to the sanctuary. It is not unlikely, of course, that it occupies the position of the old entrance to the Hindū shrine, but, although in many mosques in India to-day the east entrance is not the one adopted for daily use, there seems little doubt from the imposing character usually given to their design, that it is from the east that the Musalmān is intended to enter his house of prayer. And, architecturally speaking, this would seem to be the logical conclusion to arrive at.

What 'Alāu-d-dīn intended for his eastern entrance must be left to conjecture; but, on the north, four piers still standing above the ground point to a gateway having been started, which was to be but little inferior in scale to the 'Alāi Darwāza. The writer's impression, however, is that it was from the south that the majority of worshippers entered, the larger and more important portion of the city on that side appearing to be the strongest argument in support of this. It will be remembered that Qil'a Rāi Pithora, the first city of Delhi as it is called, and the capital of Prithī Rāj, the Chauhān king of Delhi and Ajmer, was used as the headquarters of the Empire by the early Muhammadan invaders, and it will be seen from a study of the ground that, between the north wall of the northern extension of 'Alāu-d-dīn and the line of the north wall of the inner citadel of Rāi Pithora, there is but a narrow strip of ground; moreover, the space between the north wall of the citadel and the outer wall of the city (the two walls must be carefully distinguished), comprising the extensive *faubourgs* which were a constant source of anxiety to the Sulṭāns, owing to the frequent incursions of the Mughals, appears to have been less important than the corresponding space to the south. The latter, as has been already said, contained the graves of many saints, among them being



a. THE SOUTH-EAST CORNER OF THE EASTERN COLONNADE OF ALAU-D-DIN, SHOWING THE CORNICE IN ONE BAND ONLY.



b. COLUMN BASES OF THE NORTHERN COLONNADE OF ALTAMISH.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

that of Quṭbu-d-dīn Bakhtyār Kākī of Ush, who accompanied the invaders to India and was the friend and counsellor of Altamish: and, what perhaps made it more popular, was that it was the side of the city farthest from the danger of assault.

The northern and southern courts of Altamish's extensions, which are now exposed to their old level, were found to have been floored with "random rubble" paving set with but little care, and affording additional evidence of the haste with which the work was executed. The floor level of the southern mosque chamber of Altamish, the counterpart of the one to the north which has already been alluded to, has also been exposed. The paving of these chambers is noticeably executed with greater care than that of the outer "open" courtyards. The mosque chambers were evidently intended to be roofed by domes as the arrangement of the pillars in the northern compartment testifies. Here the bases of the former columns were found almost all *in situ*, and the capitals as they had fallen. No shafts of columns were found, however; and in the southern compartment there were no masonry remains at all. Some of the circular stones of the domes of the northern compartment were found as they had collapsed, the nature of their ornament retaining the same Hindū character as that seen on the domes of the mosque of Quṭbu-d-dīn; but a new feature was evidently to be introduced in the form of circular inscribed bands round to the inside of the dome, circular stones being found with the concave side carved with inscriptions. It is much to be regretted that none of these inscriptions were of a historical character. That there were three *miḥrābs* in the mosque chambers of Altamish will be seen from those that remain in the northern chamber (see Pl. LXIII *a*). The central *miḥrāb* is larger and higher than the two lateral ones, and the northernmost still retains some of its carved surroundings. From its character it seems likely that the minor niches resembled those in the tomb of Altamish in design.

Every visitor to the Quṭb will have remarked upon the thoroughness of the mutilation of the Hindū carved figures with which the columns and their lintels are so plentifully adorned. Not content with satisfying their inconoclastic fury in this way, the Muhammadans appear to have also covered over the carved work with plaster, traces of which are still to be seen in the crevices of the carvings. The plaster must have rendered the mosque much less attractive in appearance than it is now. In further illustration of the rooted aversion in which the early invaders held all things which did not conform to the tenets of their own faith, several stones were unearthed bearing, on one side, the original Hindū sculpture, and on the other, the later carving of the Muhammadans. It is not necessary to add which side was to be built into the wall. In one instance, the Hindū carving had been obliterated, even though it was not intended to be seen again. The frieze of geese was found in fragments, one portion near the south-east corner of 'Alāu-d-dīn's east colonnade, the other near the east entrance to the mosque of Quṭbu-d-dīn. Pandit Natesan, of the Archæological Department, has furnished the following interesting note thereon :—

"From time immemorial, Indian poets and thinkers have regarded the goose *haṁsa*, as a living emblem of purity and virtue, and credited it with an acute power of discrimination and a matchless beauty of complexion and gait. Thus, in

the *Vājasanēyī Samhitā,* it is said सोममद्भ्यो व्यपिबच्छन्दसा हंसः : 'The *hamsa,* by its will, drank the *soma* juice after separating it from the water with which it had been mixed' Hence was apparently derived the poetical convention that the bird possessed the power of separating milk from water. Apart from this miraculous faculty or, perhaps, owing to this very faculty, it is described in the *Ṛig Veda* as the vehicle of the *Aśvins,* the celestial physicians. The same idea has probably induced the authors of the epics and the *Purānas* to make it the vehicle of Brahmā the Creator, who in virtue of the very functions with which he has charged himself, is supposed to possess a high sense of discrimination; for, according to the Hindū 'doctrine of Karma,' a man must be born in the status to which he becomes entitled by the accumulated results of his actions in previous lives. This notion came, in course of time, to be still further developed until the *hamsa,* the vehicle, was translated into its master himself. Thus, in the *Mahābhārata,* it is stated: 'The *Prajapati, Aja,* the eternal, having become a *hamsa* (with) golden (complexion) pervades the three worlds.' Further, the term is used as synonymous with soul or spirit, owing to its similarity in point of purity and migratory nature.

"So much I have said about the characteristics of the *hamsa* in order to demonstrate that the bird has always been beloved of the Hindūs for centuries prior to the advent of Buddha. But no architectural remains have come down to us prior to that age from which it would be possible to decide whether the bird was then used as a decorative device or not. Nor, so far as I can gather, is there any reference to such devices in early Sanskrit literature. We come across *hamsa* friezes for the first time, in the capitals of the Aśoka *lāts* at Sanchi and Bettia. Here again, there is some difficulty in determining whether the work was done by indigenous artists copying indigenous models or by foreign craftsmen imported by the pious Emperor from the North-West. The weight of opinion inclines towards the latter view. But, whoever executed these sculptures, it seems pretty certain that the motif itself is indigenous. And it continued apparently in use in many post-Aśokan edifices, *e g.,* in the medallions of the railing pillars at Amarāvatī, the interspaces between the scrolls are filled in with *hamsas.*"

The *hamsa* continued in use as a decorative motif on buildings of the Muhammadan period, and good examples of it are seen in the tile work of the Gwalior Fort, and in the Jahāngīrī Maḥal at Agra. After the reign of Jahāngīr, however, it ceases to appear, owing no doubt to the more orthodox tenets of the Emperors who succeeded him.

The screen arches of Altamish seem from their piers to have been intended to top those erected by Quṭbu-d-dīn Aibak. Only the actual *arch* of one of them is now standing, while the upper portion of all is in a state of ruin; it may be added that they have recently been secured against further decay. The carved stone facing of the upper portion has almost all gone and only the rubble core remains. What was the exact treatment of the upper portion of these "screen arches" is an interesting question. An inspection of the arches of Quṭbu-d-dīn (see Pl. LXVI) will show that carved masonry seems to have existed above the smaller arches, two of which stand on either side of the main arch, and whether this upper masonry was solid, or pierced



THE SOUTHERN GATEWAY OF THE SOUTH COLONNADE OF ALTAMISH.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

PLATE LXVI.



THE "SCREEN ARCHES" OF QUTBU-D-DIN.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

by smaller arches, presents a doubtful problem. Again, were these huge arches open at the back? The upper roof of the mosque behind them does not reach to half their height, and the upper part of the screen, if so left open, would give an unfinished effect, unlikely to commend itself to the Muhammadan mind. But in searching for a possible explanation of the problem let us examine the possible influences which may have led the Muhammadans to adapt the peculiar feature of these "screen arches." The essential requirement for a *masjid* or "place for prostration" is an unroofed enclosure with a wall in the direction of Mecca containing the *miḥrāb* or niche. Numerous types of "wall mosques," as they may be termed, exist in the neighbourhood of the Quṭb, and, although of later date than the buildings under discussion, well illustrate this type of building. To meet the requirements of the ever-growing number of worshippers it is not to be wondered at that additional niches appeared on either side of the central one. The "screen arches" were no doubt intended to represent the west wall of a gigantic mosque which, seen from afar, would make a strong impression on the minds of the newly conquered subjects of Islām. But another and stronger reason, which may have given rise to their construction, may have been that the Muhammadans had seen the façades of the palaces constructed in Persia by the Sassanid dynasty (A.D. 226 to A.D. 641), of which instances are found in the palace of Ctesiphon (see Pl. LXVII *a*) and the ruins of the palace of Fīrozābād in Persia. "These imposing edifices display in their mass and proportions much of the grandeur of ancient Chaldæo-Assyrian buildings; they have huge halls covered with immense barrel vaulting, other square halls roofed with a dome tending in the interior most often to the ovoid form, and supported at the four corners by semi-circular recesses hollowed in the walls, thus transforming the square building into an octagon. The exterior walls, especially the façades, have colossal entrance archways approaching in contour the pointed arch,[1] and the side walls have blind arches disposed in ranges of two or three storeys and resting either on groups of little columns set in the wall or on tall columns or circular pilasters, also engaged in the wall, which divide the spaces and form a regular architectural design, recalling the constructive principles of the edifices of Persepolis and Susa. These tall cylindrical pilasters and these groups of small columns engaged in the wall, the blind arches, the great central archway, the cupolas, the great barrel vaults, the semi-circular recesses, all passed later into Byzantine architecture, and through it into our own mediæval architecture, and some of these elements, especially the cupolas and the pointed arches, were absorbed into Arabian art.........Similarly, the lofty tower at Jur said to have been a fire temple with its decreasing tiers and ascending ramp is probably derived from the Assyrian Zikkurats and may be considered one of the prototypes of the Arab minarets seen in these regions."[2]

At Fīrozābād there is another ruined tower[3] (see Pl. LXVII *b*), which may well have suggested the *mīnārs* of the Muhammadans.

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[1] In the ruins of Rabbat-Amman may be noted a horse-shoe arch with an acute section.

[2] Carotti. *A History of Art.* Revised by Mr. Arthur Strong. London. 1908.

[3] This tower is referred to at length by Perrot and Chipiez. *Histoire de l'art dans l'antiquité.* Tome V. p 649.

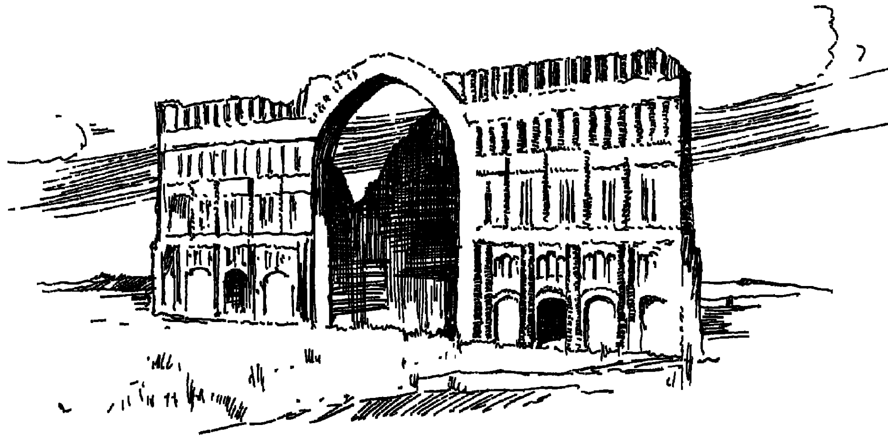
These are interesting points and well worthy of the consideration of all students of Indo-Muhammadan architecture. The illustration shows the palace of Ctesiphon, the façade of which may give some clue to the treatment of the upper portion of the screen arches at the Quṭb. In the semi-circular recesses referred to above the prototype of the pendentive, as elaborated by the Muhammadans, will be readily recognised. That the Quṭb Mīnār may possibly have been influenced by the towers at Jur and Fīrozābād (see Pl. LXVII *b*) is a suggestion that will, of course, find no support among those who claim the tower as having been a Hindū conception, but it seems not unlikely, that, if the writer's suggestion that the façades of the Sassanid palaces gave the idea for the "screen arches" of Quṭbu-d-dīn, is a correct one, the Sassanid tower also influenced the design of the *mīnār*.

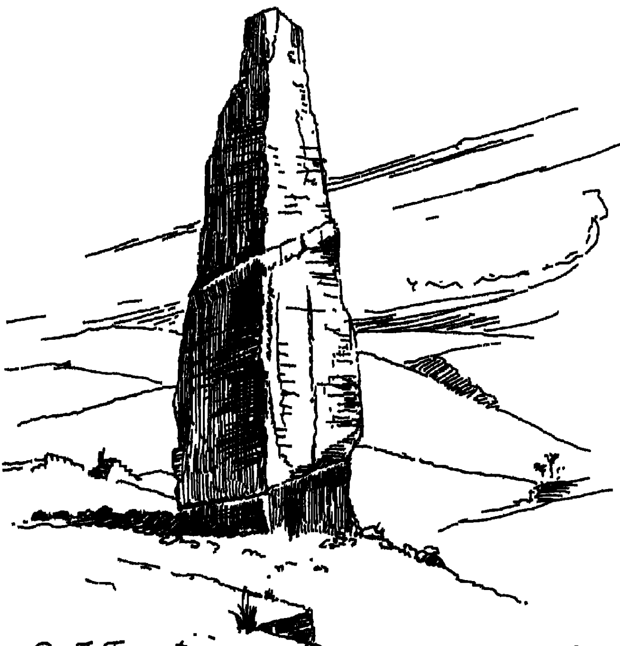
It will serve no purpose in this article to go at length into the controversy which is still going on as to whether the *mīnār* is of Hindū or Muḥammadan origin. The arguments given by General Cunningham seem to be the strongest possible and the only claim, on architectural grounds, that the *mīnār* has to a Hindū origin, is that the star-like plan resembles the form of certain old Indian temples, an argument which is weakened by the existence of the *mīnārs* believed to exist at Ghazni (see Pl. LXVII *c*) which are of a somewhat similar plan. It seems more than probable that they too are the outcome of the design of the tower at Jur, while the inner spiral stairway of the Quṭb Mīnār has taken the place of the ramp, ascending round the outside of the Sassanid example.

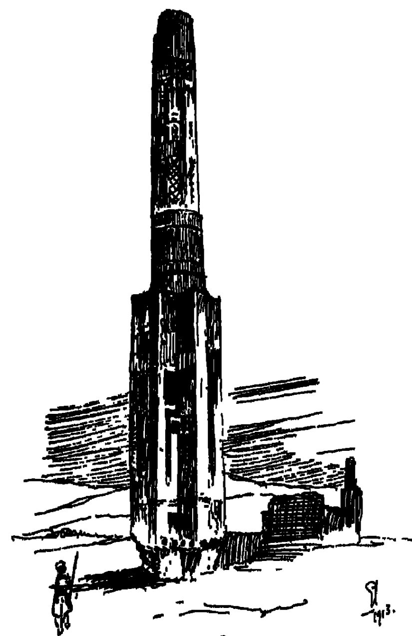
The screen-arch was destined to play a most important part in the future of Indo-Muhammadan architecture. The next development of it is seen in the Begampūrī Masjid some two miles from Quṭb, and erected in 1387 A.D. during the reign of Fīroz Shāh Tughlaq (see Pl. LXVIII). Here, a distinct advance in treatment is noticeable, the central arch having become a more coherent part of the whole design. At Jaunpūr it appears as the principal feature of all the remarkable mosques for which that town is famous. Indeed many consider it to be a unique and local feature and to have been evolved by the Jaunpūr builders themselves. It appears again at Aḥmadābād treated with even more individuality and charm, but it is, nevertheless, the "screen arch" of Quṭbu-d-dīn, taken from its birthplace at the mother city of the Muhammadan empire and decking itself out afresh to suit the individuality of a kingdom, which had grown powerful enough to stand alone and to show its independence by the formation of a new style of architecture, based on the ground-work of the parent style at Delhi.

Later on Akbar adapted the screen arch to his Buland Darwāza at Fatḥpur Sīkrī, and it has given to architecture a monumental type of gateway, the effective and harmonious designing of which has proved the stumbling block to architects of all ages and all nations with the exception of the Muhammadans, who, says Fergusson, treated the problem with more success than anyone else.

'Alāu-d-dīn's projected northern court was evidently intended to be equal to the area occupied by the buildings of Altamish and Quṭbu-d-dīn, with the addition of another eastern court. The arrangement was to be the same; that is, the main chamber of the mosque, fronted by a range of "screen-arches," (see Pl. LXVI) was to occupy the west side of the court, the other sides being surrounded by a colon-







LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

a. THE RUINS OF THE PALACE OF CTESIPHON, PERSIA AFTER DIEULEFOY.

b. RUINED TOWER AT FEROZABAD, PERSIA.

c. MINAR AT GHAZNI.

PLATE LXVIII.



THE BEGAMPURI MASJID NEAR THE QUTB, SHOWING THE FIRST DEVELOPMENT OF THE "SCREEN ARCH."

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

nade, entered, it is presumed, by gateways at the principal points. The rubble-cored piers of the northernmost of these gateways are still standing, and excavation revealed the remains of the steps which led up to the gate from the low ground now occupied by the diverted Trunk road. This is interesting, inasmuch as an entrance from the north has not yet been noticed. It must, however, be remembered that 'Alāu-d-dīn rendered the city considerably more secure against invasion by the Mughals, and, at this time, Sīrī was built so that its front in the north-easterly direction (that from which the invading hordes usually appeared) might be protected. Of the other gateways to his extensions no traces have been found, and the ones on the east front shown in Pl. LXI are a conjecture of the writer. The design of the external eastern and northern colonnades in the same plate is suggested by the small portion of the eastern colonnade, still remaining in the south-eastern corner of the area. Extending northwards from this point remains of foundations of the projected colonnade were found for a distance of some 100 feet and then they abruptly ceased. A beginning had evidently been made on the eastern and northern outer colonnades of the great north court surrounding the unfinished *mīnār*. In the case of the former there were traces of foundations having been begun and material collected, while in the case of the latter the inner face of the back wall was easily traceable, a small portion of its outer face still remaining at the north-west corner. It is interesting to note that in the centre of the northern gateway of 'Alāu-d-dīn, above referred to, traces remain of a water channel which, tradition avers, brought water for the construction of these buildings from a well some 200 yards distant. For the intended design of 'Alāu-d-dīn's "screen-arches" the imagination must again be drawn upon, but it would seem from the ruined masonry that remains of their piers that there was to be a large central arch opposite the great *mīnār*, and flanked by four smaller ones. None of the "facing" work on them appears to have been begun, except in the case of the southernmost, the dressed stone base of which still remains. An examination of the ground immediately behind the screen arches revealed no remains of the projected mosque chamber, but that this was to be made, is evident from the small portion of it which has been exposed to view outside the north-east corner of the tomb of Altamis͟h. Here the bases of the columns were found undisturbed and it also appears that columns were intended to stand in the arch openings. Stones intended for the domes were also found and a considerable quantity of carved work, both inscribed and ornamental, but no historical inscription. The carving is executed with noticeably greater refinement than that seen on the work of Altamis͟h, and the bases show that the columns were intended to be smaller, at all events in girth, than those of Altamis͟h. It is not improbable that Altamis͟h had exhausted the supply of Hindū materials, and that 'Alāu-d-dīn had to carve for himself, which perhaps accounts for the dissimilarity in size and ornament. The columns, as has been largely the case elsewhere, have all gone, no doubt owing to their usefulness as lintels for the later buildings.

The *mīnār* of 'Alāu-d-dīn would, if finished, have been one of the most remarkable structures in the world. The present rubble core is some 80 feet in height, inclusive of the rough plinth, and 90 feet in diameter. This, if the facing stones

are added, gives a diameter, as ordered by 'Alāu-d-dīn, of twice that of the Quṭb Mīnār, which is 47 feet 3 inches. Its height, if kept in the same proportion, would, exclusive of any cupola or lantern which might have been erected on its summit, have been 476 feet, 71 feet higher than the lantern of St. Peter's at Rome, 111 feet higher than that of St Paul's, and 232 feet 6 inches higher than the top of the finial of the Tāj Maḥal. The fluted shaft rests on a rough circular plinth, 20 feet in width, and this, in its turn, rests on the base proper, a square with its corners cut into a series of re-entrant angles. The portion of this base that was found was edged with finely dressed stone masonry, varying from one to two feet in height, and its vertical face had a slight "batter," or slope—a most interesting feature, as sloping walls, except for fortifications, were not to come largely into use till the reign of Ghiyāthu-d-dīn Tughlaq, 5 years later. It seems not unlikely that the general external treatment of the *mīnār* was intended to be like that of the other one, and it is interesting to note that 'Alāu-d-dīn, in addition to ordering the building of this gigantic structure, also gave directions that the old one should receive a new casing and cupola. Whether this was ever done by him is doubtful; for the name of 'Alāu-d-dīn is not found on any of the inscriptions, and it seems unlikely that he would have omitted to mention such an important piece of work. He may, however, have carried out repairs or additions to the two upper storeys, originally the work of Altamish, which, it will be remembered, were repaired later by Fīroz Shāh. The doorway of the *mīnār* of 'Alāu-d-dīn is on its east side and, from the large size of the opening left for it, seems to have been intended to have been of a more imposing design than that of the Quṭb Mīnār which is on the north side.

In Pl. LXI, which the reader is invited to study with the plan on Pl. LXII, the writer has attempted to show the appearance of the Quṭb area, as it would have been, had all the extensions projected by the different Sulṭāns been finished. It has not, however, been possible to show in full the great *mīnār* of 'Alāu-d-dīn for want of sufficient data; and the appearance of the "screen-arches" behind it cannot be gauged with any great degree of accuracy. Behind the mosque is seen the citadel of Rāi Pithora, Lāl Koṭ, adopted by the Muhammadans as their capital, and it seems from the heaps of stones and remains of foundations which still encumber the ground in this quarter that it was of considerable pretensions. The Anang Tāl, the great tank of Anang Pāl II (C: 1060), is seen just above the *mīnār* of Quṭbu-d-dīn, while behind it is seen a line of walls, considered by some authorities to have been the east wall of the citadel, and terminating towards the north near the Sohan gate. The wall running east from the Sohan gate is generally held to be the work of 'Alāu-d-dīn, who built it as a protection against the Mughals. In the top left-hand corner will be noticed the Ranjīt gate, while a little further north the wall terminates in the Fatḥ Burj. Running almost due north from the latter was the outer wall of the city, still traceable by its ruins and meeting, after a distance of about half a mile, the wall of Jahānpanāh. The high bastion just east of the Fatḥ Burj is the Sohan Burj, which the visitor to the Quṭb will notice on his right as he approaches the Quṭb, while the gate below the *burj* as observed above, bears the same name. It will be remarked that the top storeys

of the Quṭb Mīnār are not shown as they now exist, the present ones having been rebuilt by Fīroz Shāh Tughlaq in 1368. The cupola is also conjectural.

Excavations at the time of writing this note have disclosed a *tahkhāna* hitherto unknown, under the tomb of Altamish, the investigation of which is likely to prove of great interest.

GORDON SANDERSON.

THE NADAN MAHALL, SOLAH KHAMBA, AND THE TOMB OF IBRĀHĪM CHISHTĪ, LUCKNOW.

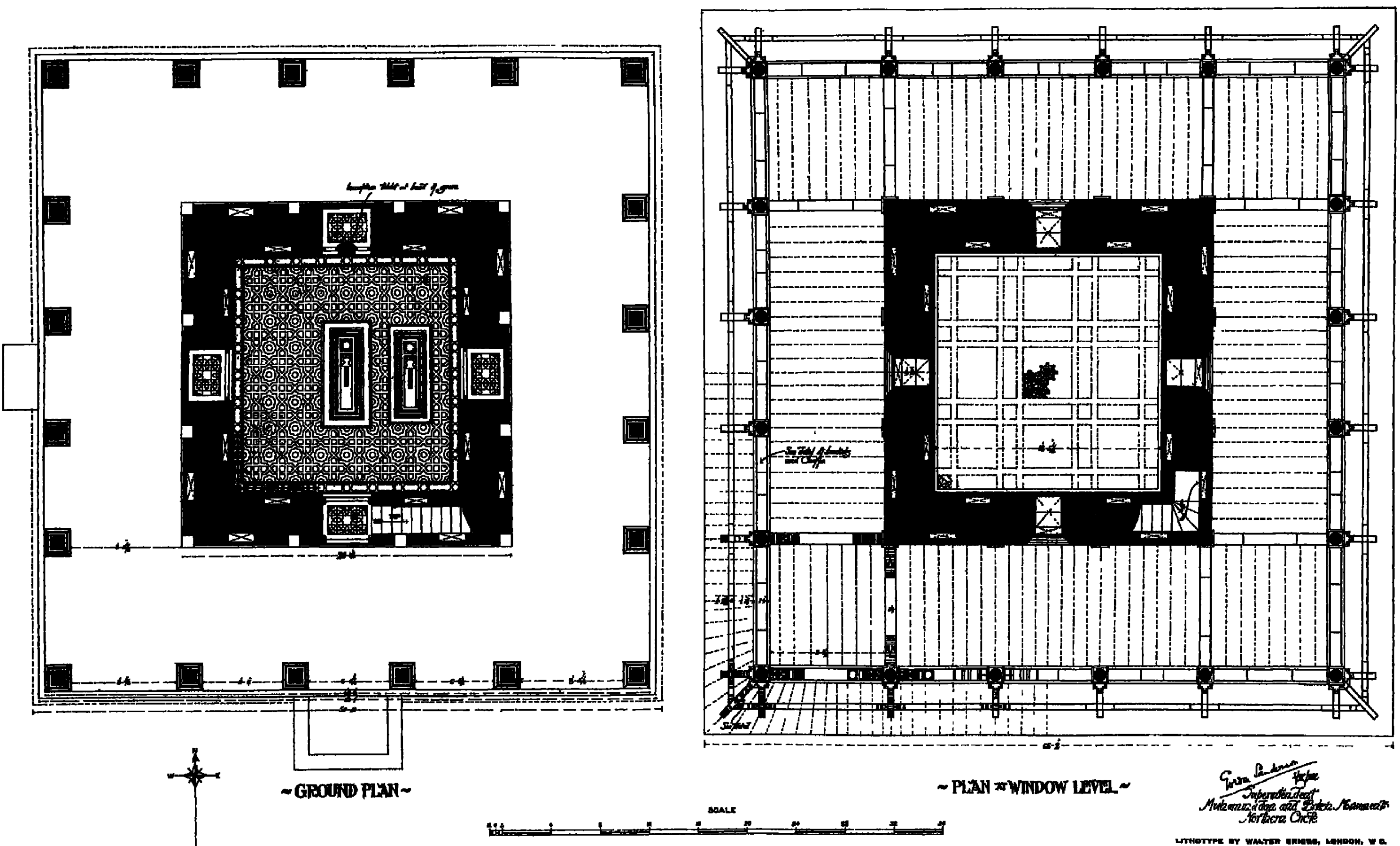
THE architecture of the Oudh Sovereigns at Lucknow has been aptly likened to that of the decadent period to which Vauxhall gardens belonged, while the Gazetteer in no measured terms considers it as the most debased example of an architectural style to be found in India. This opinion the majority will share to the full; and it is with pleasure therefore that one turns to the three small buildings, which, buried as they are in the heart of the most crowded quarter of the city, had, until 1909, escaped all notice. Thanks for their discovery, if one may here use the term, are due to Mr. Yusuf Husain Khan, Barrister of Lucknow, while Mr. Jopling, I.C.S., and Mr. Botting, Secretary to the Municipality, have also shown a keen interest in their welfare. The late Mr. R. Froude Tucker of this Department in a conservation note addressed to Government, dated December 1909, dealt with the claims which these interesting buildings had to preservation.

Nadan Maḥall.

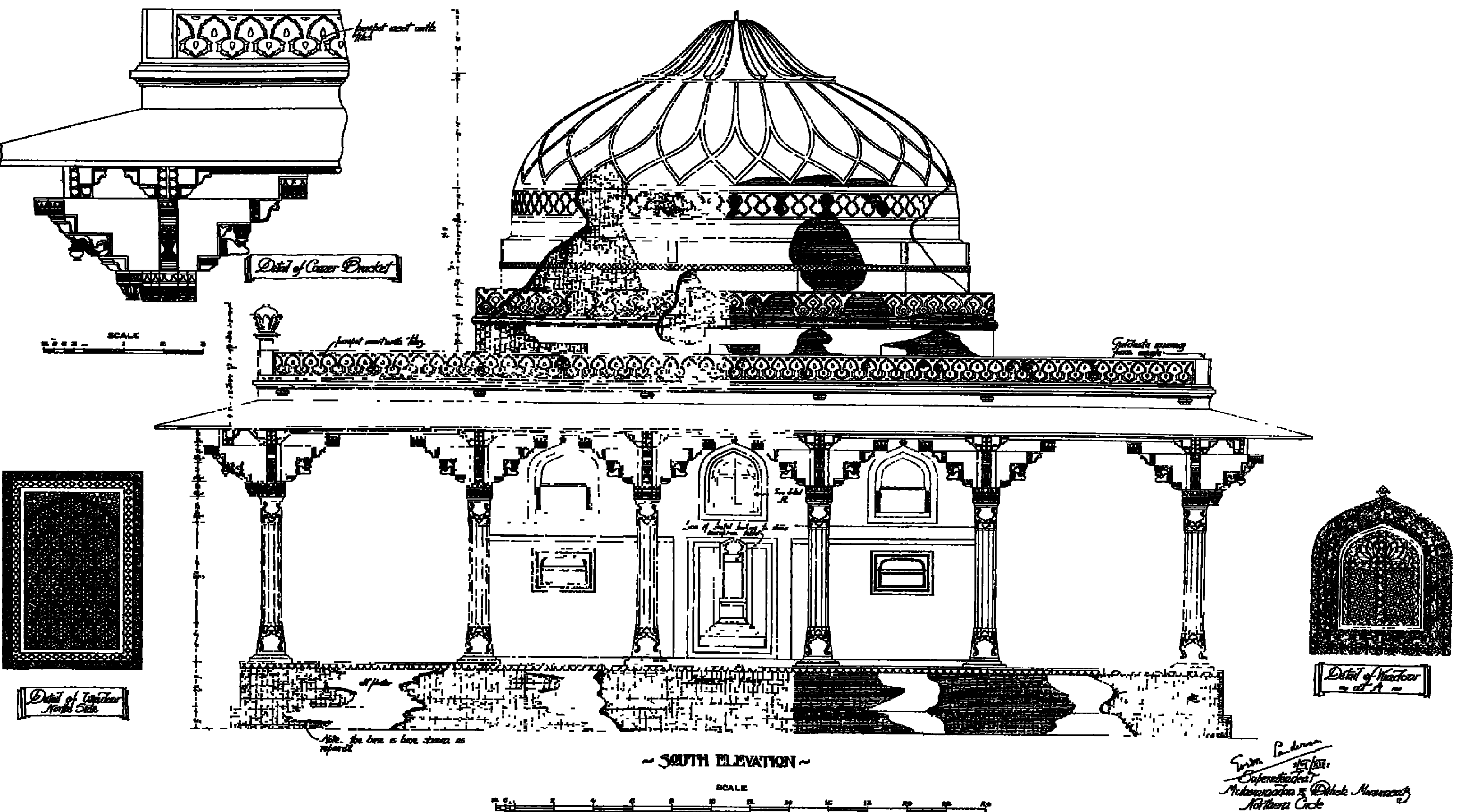
There is no circumstantial evidence to warrant the identification of the tomb of Shaikh 'Abdu-r-raḥīm Khān or the "Nadan Maḥall," as it is locally called, but strong tradition, and the existence near by of the tomb of the father, Ibrāhīm Chishtī, afford strong grounds for the belief that the mausoleum is correctly named. The inscription on the tomb of Ibrāhīm Chishtī states that the latter died in 961 Hijri (1553-4 A. D.). His descendants still live near the spot and their genealogical tree avers 'Abdu-r-raḥīm to be the son of Ibrāhīm. 'Abdu-r-raḥīm lived at Qasba Bijnour, near Morādābād, and rose to a high position at the court of Akbar. It is recorded that he built five palaces for his wives in the Qil'ah Macchi Bawan and that his mausoleum was near the 'Aishbāgh, and named the Nadan Maḥall. He became one of the Shaikhzādas of Lucknow, and in the fortieth year of Akbar's reign rose to the command of 700. He was the friend of Jamāl Bakhtyār, from whom he learned wine drinking, and it is said that on one occasion, being wounded in a drunken brawl, his wound was tended by no less a person than the Emperor himself. It appears, from the account in the *Āin* that his wife Kishnā built the

[1] *Sawāniḥāt-i-Salāṭīn-i-Oudh*, Vol. I, page 334, also see *Ṭabaqāt-i-Akbarī*, p. 388, where it is recorded that the Shaikh is "one of the old servants of this court and a noble."

THE NADAN MAHAL, SOLAH KHAMBA AND TOMB OF IBRAHIM CHISTI, LUCKNOW.



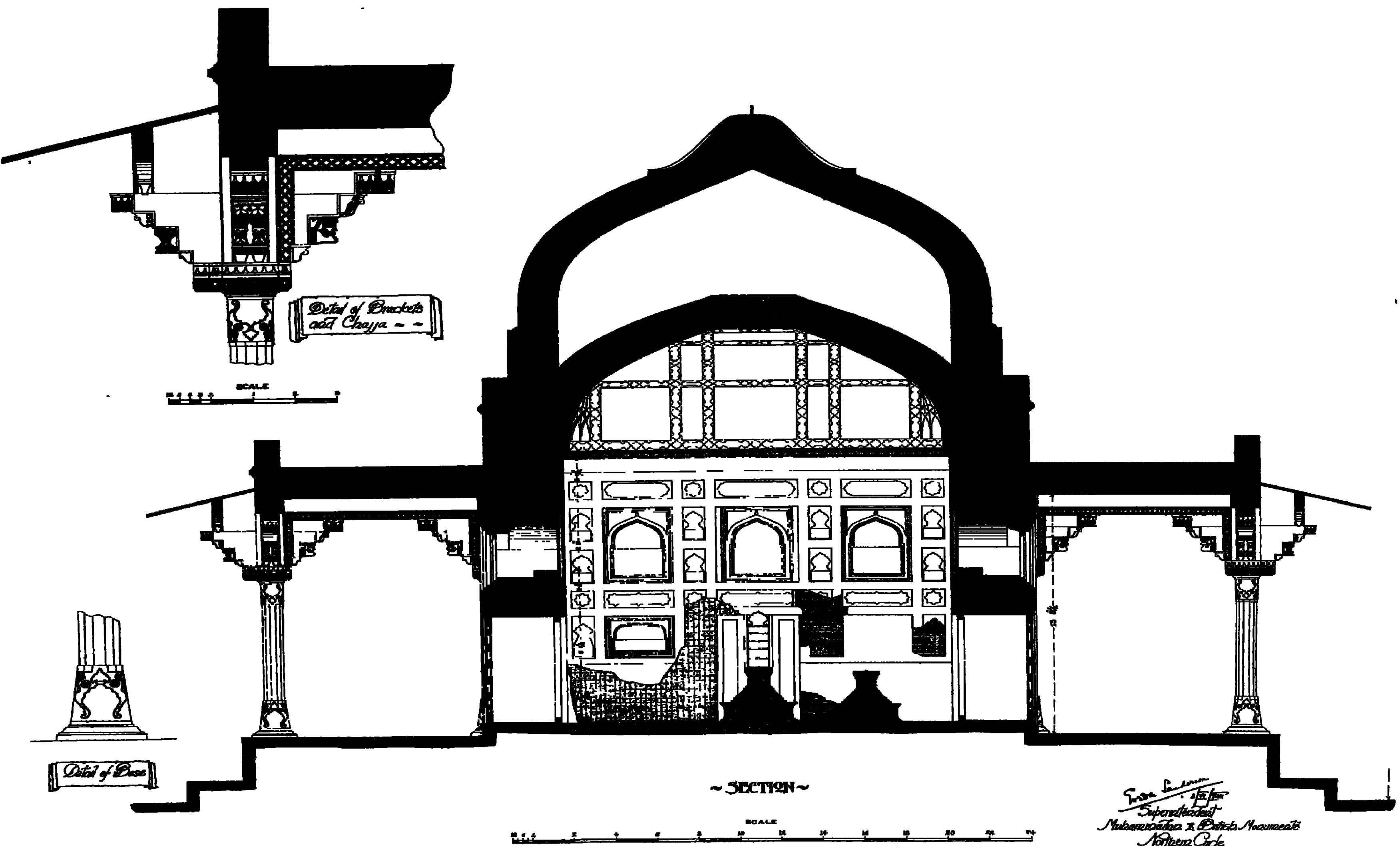
THE NADAN MAHAL, LUCKNOW: GROUND PLAN AND PLAN AT WINDOW LEVEL.



LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

THE NADAN MAHAL, LUCKNOW: SECTION AND DETAIL OF BRACKETS, CHAJJA AND BASE.

THE NADAN MAHAL, SOLAH KHAMBA AND TOMB OF IBRAHIM CHISTI, LUCKNOW.



THE NADAN MAHAL, LUCKNOW:
SOUTH ELEVATION AND DETAILS OF WINDOWS AND CORNER BRACKETS.

FAZUL UDDIN
LITHOTYPE BY WALTER GRIGGS, LONDON W.C.

palace and the gardens at Lucknow, including the mausoleum, and that she entertained thereat all passers by, according to their station in life.[1] An interesting anecdote, not unlike that of the *bihishtī* of Humāyūn, is told of the services of the Shaikh to Akbar on one occasion. The Emperor was warned by his astrologers that it was inauspicious for him to occupy the throne for a certain period of two days and five hours. Vacating the royal office, the Emperor ordered 'Abdu-r-raḥīm to hold the reins of Government during the period of danger. When only two hours of the time remained to run Akbar sent impatiently for the royal robes. As he was about to assume them, the page who bore the royal sceptre fell dead at his feet, bitten by a snake that had been concealed in the staff. As a reward for the services of 'Abdu-r-raḥīm, the Emperor bestowed on him a present, amounting to three days' income of the kingdom, and granted him *jāgīr* of the *Parganas* of Koraj and Lucknow.

The Nadan Maḥal (see Plate LXXII *a*), as will be seen from the measured drawings (see Pls. LXIX—LXXI) that accompany this note, consists of a domed chamber measuring externally 26 feet 3½ inches square, and surrounded on all sides by a verandah 9 feet in width. The central chamber, containing the graves, was obviously constructed, in the first place, as a twelve-pillared open pavilion, but was eventually bricked up, probably after the Shaikh's death. The bays, thus filled in, are panelled and recessed, while *jālī* screens, of which a specimen is illustrated, occupy the openings on all sides except the south, which is the entrance to the tomb. The verandah possesses four columns of the usual Mughal type on each side, in addition to those at the four corners of the building. On the capitals will be noticed the moulding, so commonly seen crowning the *dasa* or plinth of Indian buildings, and in the form of a series of dwarf inverted arches. This has been identified as the direct descendant of the wood forms of the earlier structures, in this case representing the ends of the logs used for flooring, and covered at the top by a plank. Might it not also be an adaptation of the Greek "egg and tongue," but with the omission of the tongue? In the brackets which support the boldly projecting *chhajja*, the forms of birds and elephants, although considerably conventionalised, are easily recognisable, while the triple brackets which carry the corners of the *chhajja* are of especial interest. Above the *chhajja* runs the moulding, usually seen in this position, namely, two cavettos with a broad central fillet, while below it are holes (*murwars*) for the reception of the *shāmyāna* (sun-awning) ropes. Above this the parapet is ornamented with a *madākhil* design in blue tiles with yellow centres, the whole based on a groundwork of plaster coloured a dull red. At the four corners of the parapets were formerly *guldastas* or pinnacles of the usual pattern. The dome, crowned by a lotus-leaf finial base (the finial has gone), and relieved by an intersecting pattern and a border of green and blue tiles, rises from a low octagonal drum, which stands on a square pedestal ornamented with a frieze of coloured plaster. The roof is reached by a narrow stair in the thickness of the wall to the right of the entrance.

The roof of the verandah is carried by sandstone lintels, the edges of which are ornamented with the *guilloche*. Within, the floor of the mausoleum is of marble

[1] *Āīn-i-Akbarī*, Vol. I, p. 370.

inlaid in one of the familiar geometrical patterns with different coloured stones, while the border is formed by a series of stars, plain and elongated, inlaid in their turn with conventional leaf-patterns. The internal wall surfaces, to the level of the springing of the inner dome, which is marked by a *cyma recta* moulding, are relieved by a series of niche and star-shaped panels. The soffit of this dome is divided up by ornamental plaster ribs, floral designs of considerable delicacy occupying the interspaces. At the corners, a form of "stalactite" corbelling is introduced. The Shaikh's tomb, of marble and elaborately decorated with inscriptions from the Qurān, lies under the centre of the dome, and is furnished with a headstone of red sandstone upwards of seven feet in height, also engraved with further scriptural quotations. The second tombstone, also of marble, bears like that of the Shaikh, the *qalamdān*, thus setting at nought the tradition that it is the resting place of the Shaikh's principal wife.

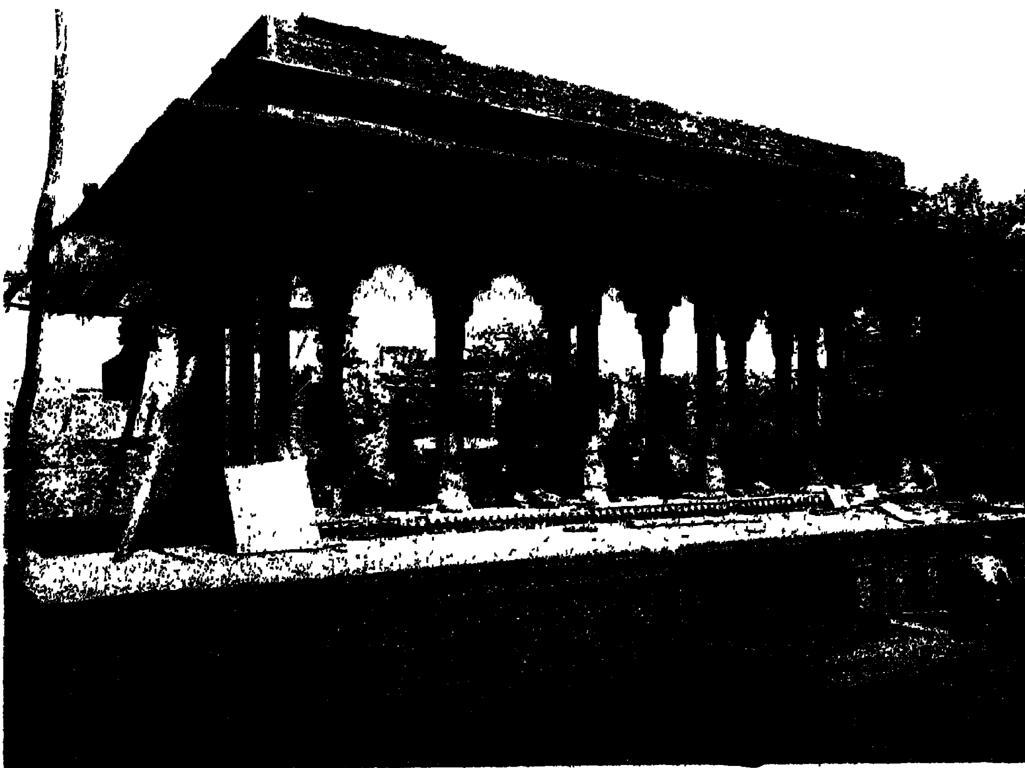
The measures of conservation consisted in the removal of all modern additions and traces of the occupation of the building by the local *chamārs*; in the renewal, as a protective measure, of missing *chhajja* slabs, the edging off of all old plaster, plain and ornamental, and the underpinning of the plinth with small Mughal bricks.

Solah Khamba.

The Solah Khamba (see Plates LXXII *b*, LXXIII-LXXVII) lies some twelve feet to the east of the Nadan Mahall, and is an open pillared pavilion built of red sandstone and measuring some 32 feet 1 inch by 13 feet 2 inches. It stands on a platform 44 feet by 12 feet 7 inches and 3 feet 10¾ inches in height. The columns and the brackets are of very similar design to those on the larger tomb, but the corner brackets are especially ornate, being carved to resemble the head of an elephant. The moulding above the *chhajja* is also more elaborately treated, two ornamental bands running under the main members, the lower of these bands being a series of interlaced floral buds, a device frequently to be seen later on the buildings of Shāh Jahān. The parapet is also of sandstone, devoid of tilework, but carved with an elegant *madākhil* design. The upper portion of the brackets is here carved with a moulding strikingly reminiscent of the Greek "egg and tongue." The floor of the platform is of red sandstone, bordered by a frieze of plain and elongated stars, its central and corner portions being emphasised by the introduction of black slate, schemed with the red sandstone into geometrical patterns. The outer face of the platform is richly ornamented, the styles and rails being carved into a series of squares set diagonally, their centres being a floral form singularly like the "tablet flower," so commonly seen in Gothic work of the Decorated period. Within this border, the panels are surrounded by an intertwining floral design, which frames the niche-shaped divisions into which the panels are split up. Some of these contain carvings of the vases for wine or sweetmeats, so often seen on the buildings of Jahāngīr's reign. The angles of the base are terminated by miniature columns, carved with a "chevron" pattern. On the west side the centre panel bore traces of an inscription, an unusual feature in this position, but the letters were so flaked away as to render it indecipherable. The pavilion contains five tombs, the two nearest the Nadan Mahall being of marble. One of the latter bears a *qalamdān*, thus again disposing of the local tradition that these two graves are those of the two other wives of the Shaikh, the daughters of the Mahārājas of Jaipūr and Jodhpūr. The



a. THE NADAN MAHAL, LUCKNOW.

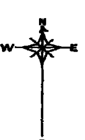


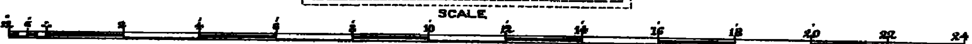
b. THE SOLAH KHAMBA, LUCKNOW.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

~ GROUND PLAN ~

Position of old Steps



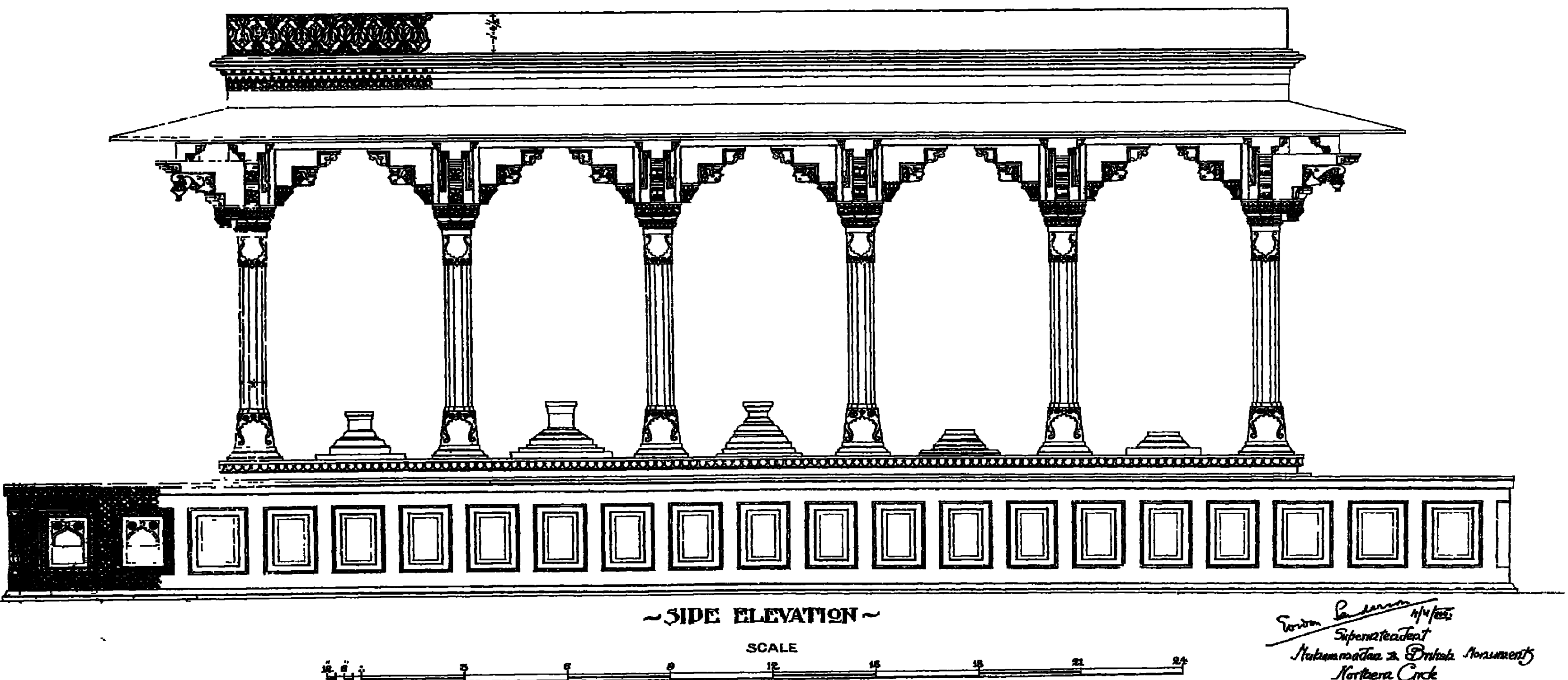


Gordon Sanderson.
Superintendent
Muhammadan & British Monuments
Northern Circle

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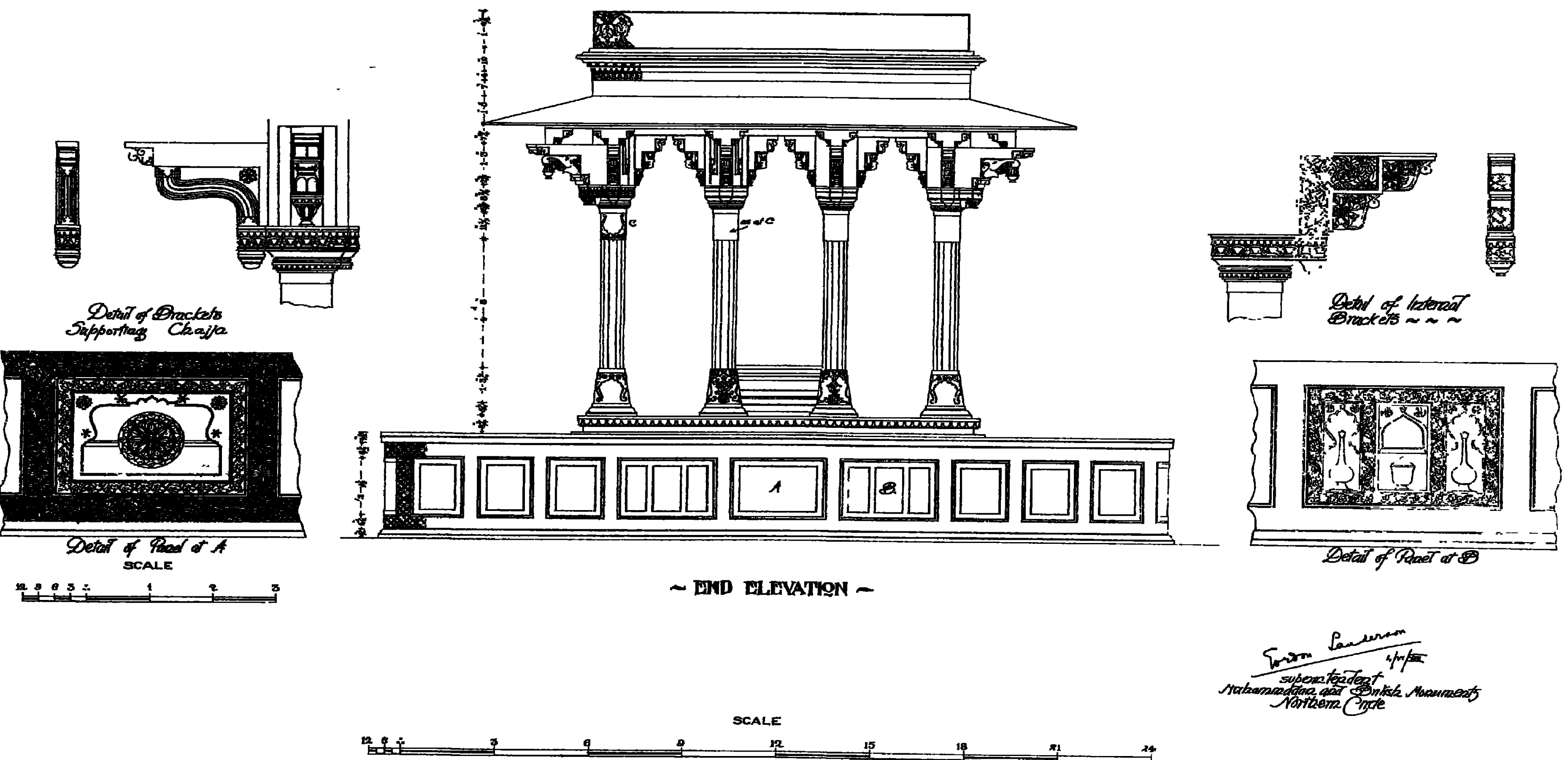
THE SOLAH KHAMBA, LUCKNOW: GROUND PLAN.

THE NADAN MAHAL, SOLAH KHAMBA AND TOMB OF IBRAHIM CHISTI, LUCKNOW.



THE SOLAH KHAMBA, LUCKNOW: SIDE ELEVATION.

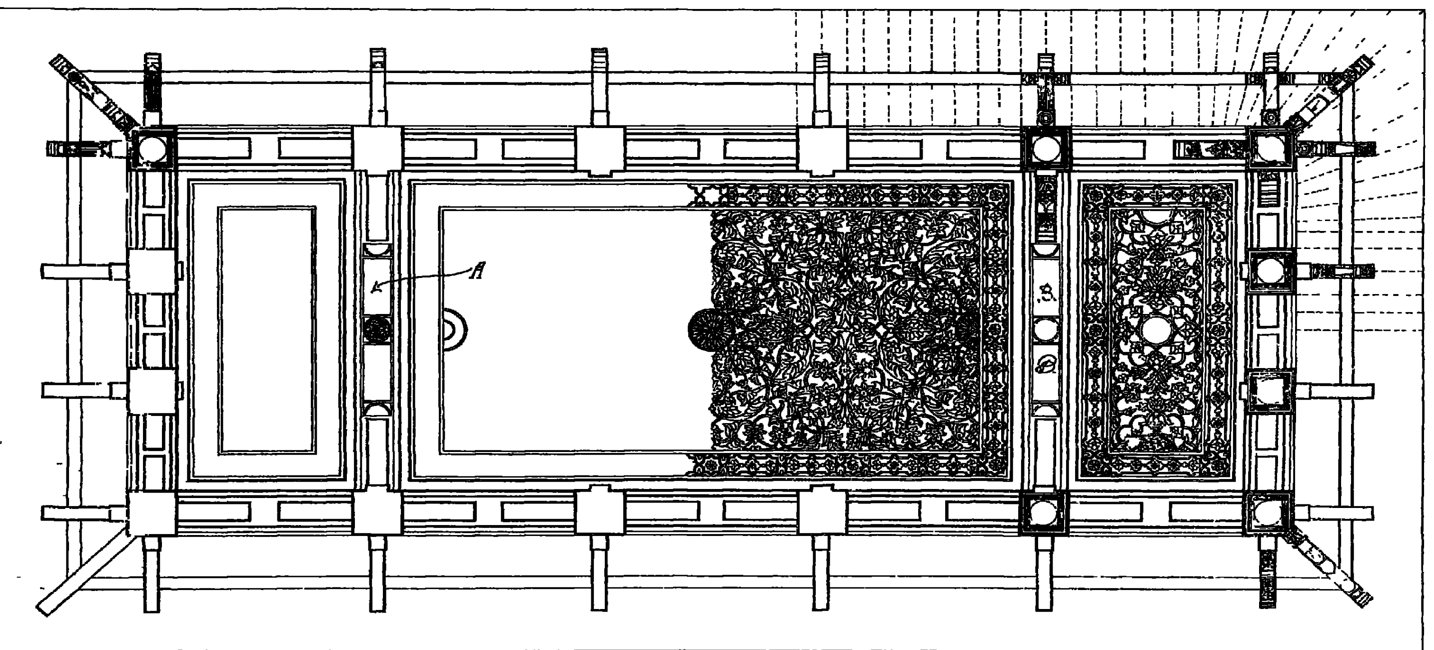
THE NADAN MAHAL, SOLAH KHAMBA AND TOMB OF IBRAHIM CHISTI, LUCKNOW.



LITHOTYPE BY WALTER GRIGGS, LONDON W C

THE SOLAH KHAMBA, LUCKNOW:
END ELEVATION AND DETAILS OF BRACKETS AND DECORATIVE PANELS.

~ Detail at A ~



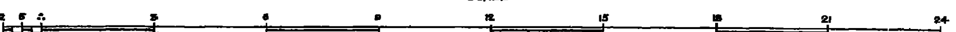
~ Detail at B ~

~ Detail of Ceiling ~

N

Gordon Sanderson
27/x/13
Superintendent
Muhammadan & British Monuments
Northern Circle Agra

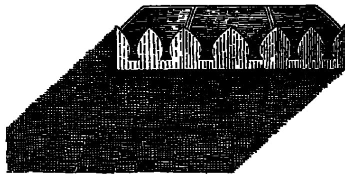
SCALE



LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

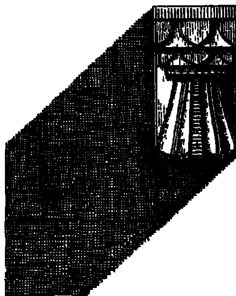
THE SOLAH KHAMBA, LUCKNOW: DETAIL OF CEILING.

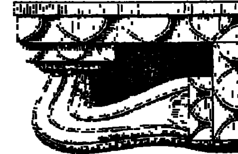
THE NADAN MAHAL, SOLAH KHAMBA AND TOMB OF IBRAHIM CHISTI, LUCKNOW.





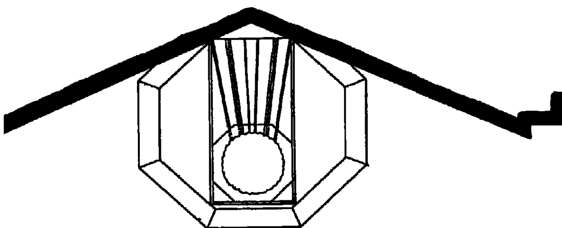
Tomb of Ibrahim Chishti
Lucknow
Detail of Lamp Bracket



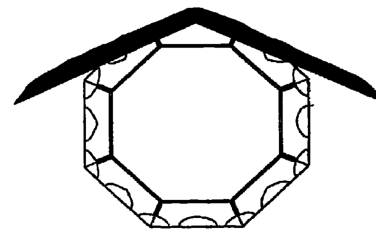


~ Front Elevation ~

~ Side Elevation ~



~ Plan ~



~ Plan at top ~



LITHOTYPE BY WALTER GRIGGS, LONDON W.C.

TOMB OF IBRAHIM CHISTI, LUCKNOW: PLAN, ELEVATION AND DETAILS.

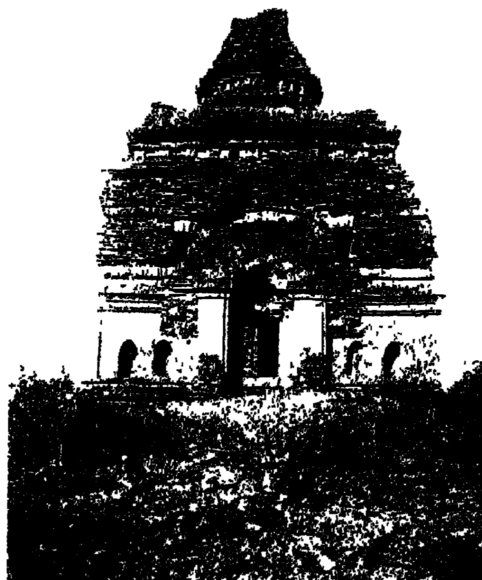
THE NADAN MAHAL, SOLAH KHAMBA AND TOMB OF IBRAHIM CHISTI, LUCKNOW



a THE TOMB OF IBRAHIM CHISTI, LUCKNOW.



b. DOOR-FRAME OF NATHLAUNG KYAUNG, PAGAN.



c. NATHLAUNG KYAUNG, PAGAN.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

ceiling of the pavilion is carved with a flowing conventional pattern. The whole of the now exposed ornamental base, described above, was buried under an accumulation of earth which had been carefully paved over, and the building, like the Nadan Maḥall, served the purpose of an abode for *chamārs*.

The stonework of this building has been repaired and renewed where necessary, and the facing stones of the parapet, found by Mr. Woods, the Executive Engineer of Lucknow, used as the covering for a neighbouring well, have been reset. The two buildings were formerly enclosed with a compound wall and portions of this, including a corner turret, were to be traced, before the work of conservation began, among the mud huts that filled the enclosure and hid the buildings almost entirely from view. These huts have now been removed and the enclosure cleared to its former extent. A number of less important graves, probably those of the Shaikh's followers or disciples, were found in the area which is to be grassed and planted suitably with a few trees. It is believed that the Municipal authorities have a scheme on foot for a new road to the north of the enclosure, in which case the monuments are likely to become still better known, as they well deserve to be.

Tomb of Ibrāhīm Chishtī.

The tomb of Ibrāhīm Chishtī (see Plates LXXVII and LXXVIII *a*), the father of Shaikh 'Abdu-r-raḥīm, lies a short distance to the east. It is a domed building measuring externally 27′ 0″ square, and built of *kankar* blocks 2′ 0″×10″, the outside walls being formerly covered with painted plaster decoration. The southern entrance over which is the following inscription[1] is of interesting design, and the detail strongly resembles that seen on structures of the Afghan period at Delhi.

قضا را شیخ ابراهیم چشتي * که بوده در زمان فرد و یگانه
شد ان قطب جهان از ملک فاني * بسوي عالم باقي روانه
ز سال فوت او هر کس که پرسد * بگو رفت از جهان قطب زمانه

Translation.

" By (the decree of) fate, Shaikh Ibrāhīm Chishtī,
" Who was in [his] time unique and incomparable,
" That pole star of the world set out from the mortal region,
" For the eternal world.
" Who ever should ask about the year of his death,
" Tell him that 'The pole star of the age repaired from the world."

The last sentence of the last hemistich contains the chronogram, the numerical value of which is equal to A. H. 961 (A. D. 1553-4).

The measures of conservation for this building consisted in the thorough removal of vegetation, which was fast forcing the blocks of *kankar* outwards, in edging off all old plaster work with cement, removing modern filling from bricked-up openings, and the provision of doors of suitable pattern, together with a small hanging lamp for the interior of the chamber. The interesting original lamp bracket has not been re-used for fear of discolouring the neighbouring walls. Sufficient of the neighbouring property has been acquired so as to leave a clear space of 15′ 0″ all round the building.

GORDON SANDERSON.

[1] I am indebted to the late Maulvi Muḥammad Shu'aib for the reading of the inscription.

CONSERVATION IN BURMA.

The Nat-Hlaung-Kyaung, Pagan.

HENRI YULE, in his "Narrative of the Mission to the Court of Ava in 1855" p. 53, describes, without naming it, "a small ruined pagoda standing close to the Thappyinnyu[1] temple" in which are Hindu statues.[2] This is the Nat-hlaung-Kyaung. It stands among a cluster of Buddhist temples to the south-eastern corner of the city wall of Pagan.[3] The name implies that it was built for housing, not figures of the Buddha, but statues of deities inferior to him : in this case, Hindu figures.

Tradition assigns the date of the building to the early part of the 10th century A. D., and ascribes its foundation to king Taung Thugyi (931-964 A. D.). But this tradition is unsupported by epigraphical evidence of any kind, and Burmese histories are silent about it. The only mention, in Burmese, of a Hindu temple built at Pagan, is found in a late manuscript called the *Pugan Mro Phūrā Samoṅ* or *Record of the Pagan Pagodas*, where it is said that it was built by king Anoratha after his return from the conquest of Thaton (1057 A.D.). This might very well be the case ; but in the absence of any authoritative corroboration, and in the light of the fact—borne out by epigraphs—that Anoratha was then a very fervent adherent of the Siṇhalese form of Southern Buddhism, it is very doubtful whether this bigoted prince would have gone the length of building a Hindu temple. There is, however, epigraphical evidence of a Viṣṇuite temple having been built at Pagan. There was found there a Tamil inscription, now at the Pagan Museum, which was translated by Dr. Hultzsch, Government Epigraphist at Madras ; it records the gift by a Vaishṇava Saint, a native of Cranganore in Malabar, of a *mandapa* in the temple of Nānādesi Vinnagar Alvār at Pagan. "Nānādesi Vinnagar," says Dr. Hultzsch, "means the

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[1] The Burmese way of pronouncing the Pāli Sabbaññu, "the Omniscient."

[2] *Cf* Grünwedel's *Sculpturen aus Pagan*, in "*Veröffentlichungen aus dem Königlichen Museum für Völkerkunde*," 128-129.

[3] The date of this wall is about 850 A.D., the year of the foundation of Pagan ; it is still clearly visible, together with the moat, on three sides of the ancient city ; the fourth side, which ran along the river bank, has disappeared owing to the encroachment of the river ; on this side, a kind of bastion can be seen quite near to the Circuit House, and a few traces of the wall are seen here and there. Shin Mahākassapa, a celebrated *thera*, in the thirty stanzas concluding his Sahassaraṁsi Ṭīkā, a commentary on the Mahābodhivaṃsa, which he wrote in 1174 A.D , gives a graphic description of Pagan ; among other things he mentions that the walls had twelve gates ; only one of these, the Sarabha gate, is now extant (for a photograph of it, see de-Beylié's *Architecture Hindoue en Indo-Chine*, p. 301), and it is well worth preserving.

Vishṇu temple of those coming from various countries. This name shows that the temple, which was situated in the heart of the Buddhist country of Burma, had been founded and was resorted to by Vaishṇavas from various parts of the Indian Peninsula.[1]" It is not certain whether it is the Nat-hlaung-kyaung which is referred to in this epigraph ; but, as it is a distinctly Vishṇuite temple, and as neither chronicles nor tradition mention any other such temple at Pagan, it is probable that the Nānādesi Vinnagar temple is none other but the Nat-hlaung-kyaung. Dr. Hultzsch says the Tamil characters of the inscription are those of the 13th century of the Christian era ; this temple, then, was built between the 11th and 13th centuries A.D., and, from its very style, this is the period to which I am inclined to assign it.[2]

It is a brick building, square in plan and surmounted by a *śikhara*. The building seems to have been plastered both outside and inside, but the plaster outside pealing off, the bricks, which were set in mud mortar fell away, in many places, from the upper structure, giving the temple, from a distance, so dilapidated an appearance as to make it appear past conservation (see Pl. LXXVIII, *fig. c*). The plaster within is in a good state of preservation, and bears unmistakable signs of having once been covered with frescoes, which have now almost completely disappeared, owing to the wall having been blackened by soot.

The building has a doorway on the east side, which forms the only entrance to it ; there was also a porch on this side, traces of which are seen on the walls of the main building, but it crumbled down long ago, burying a short flight of steps under its *débris* ; the steps were discovered when clearing the bricks and plaster preparatory to undertaking the repairs. The doorway has a stone frame, the lintel of which was found broken into several pieces (Pl. LXXVIII, *fig. b*) ; as it was not ornamented, it was replaced by a beam of reinforced concrete, for a similar piece of stone could not be found, and there is no quarry in the neighbourhood of Pagan.

The temple rests on a plinth raised about five feet above the natural surface of the ground ; this plinth is decorated with panels and mouldings which are, on the whole, in a very good state of preservation. Above the plinth, the building may be divided into three parts : the base, the central part or dome, and the *śikhara*.

In the walls of the base, on the outside, there are ten niches framed in pointed arches, four on the east side and two each on the others. Each of these niches contained originally a stone sculpture in relief ; the figure in three of the niches near the doorway on the east are missing. Of the seven that are still to be found *in situ*, only four can be identified, although badly disfigured. They represent : (1) the Varāha Avatāra (Pl. LXXIX, *fig. a*) ; (2) the Rāma-chandra Avatāra (Pl. LXXIX, *fig. b*) ; (3) the Paraśū-rāma Avatāra (Pl. LXXIX, *fig. c*) ; and (4) the Narasiṁha Avatāra ; but of this latter I am not quite sure, the figure across the lap of the principal personage having completely disappeared (Pl. LXXIX, *fig. d*). The Varāha Avatāra is in the niche at the eastern end of the south wall ; the figure is very much defaced, but its attitude, the form of what remains of the head, and the female figure of Pṛithivī[3] in a seated posture on the left shoulder, leave

[1] See Report on Archæological work in Burma for the year 1902-03, p. 7.

[2] *Cf.* Report of the Superintendent, Archæological Survey, Burma. 1912-13, paragraph 47, p. 19.

[3] This figure is hidden by the shade in the photograph, but can be discerned with a magnifying glass ; *cf.* with this plates 216, 217 and 234 of Part II of the *Ancient Monuments and Sculptures of India*, by Jas. Burgess.

no doubt as to its identity. Pṛithivī has a heavy chignon falling on her back, and her hands are clasped together in the attitude of adoration ; the depth of the niche did not allow this figure to come out well in the photograph. Rāma-chandra is easily recognized by his bow, and Paraśu-rāma by his axe. The remaining figures are so much defaced that they cannot easily be identified.

I have said that three of the four niches on the east side are empty, the sculptures having apparently been removed from them and destroyed by iconoclasts ; the figures that remain bear visible traces of wilful disfiguration. The statue that still remains is in the niche close to the entrance, on the proper left (Pl. LXXIX, *fig. e*). It is standing on a lotus flower from which two other smaller ones spring ; the arms are placed close to the body bent upward at the elbows, and each hand holds a lotus bud on a level with the shoulders ; it wears a crown ; the distended ear-lobes hang down and touch the shoulder under the weight of large ear ornaments. It has bracelets, armlets and anklets ; the lower garment is tucked up and reaches as far as the knees ; lines showing the folds are visible. I have not yet identified it. The number of niches would lead one to suppose that this also represents one of Vishṇu's Avatāras ; but it has none of the distinctive attributes of any of these.

Occupying the centre of the temple is a huge square pillar in brick, around which there is the usual circumambulatory passage, vaulted over ; this pillar supports the dome and *śikhara* above. On each face of it there was originally the figure of a standing deity placed in a niche adorned with pilasters. The figures were cut in relief in bricks. That on the east face is missing and in its place was a large hole made by treasure hunters ; this hole was filled up with concrete to strengthen the stability of the building. The figures on the other sides are very much defaced ; the attributes are all gone except for a few traces left on the bricks. They are all in the same attitude, with their four hands in the same positions ; they are in fact exact copies one of the other, and all are representations of Vishṇu. The best preserved of these three, is figure *a*, in Plate LXXX ; the lower right arm is missing. The upper right hand holds what remains of a broken object, probably the disc (Cf. Pl. LXXX, *fig. c*). The lower left arm rests on the club, traces of which are visible in the photograph ; the upper left hand holds the conch, the outlines of which are still perfectly seen even in the photograph. This last attribute shows it to be Vishṇu. Similar traces of the once existing symbols are visible, but very much more faintly, on the bricks behind the two other statues.

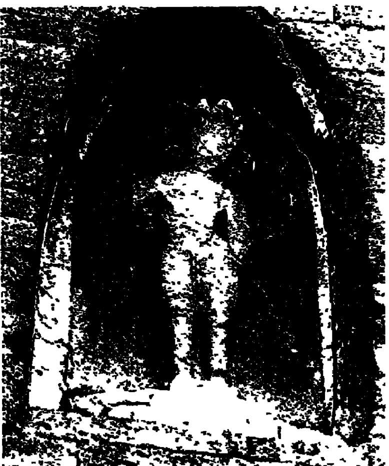
In the middle of the east face of the central pile of bricks is a large deep niche, the sanctum proper ; in the middle is to be seen the place where the central and principal figure was enshrined ; right and left of this are also the traces of two other smaller figures, now disappeared. Above the latter, on the capitals of two flanking pillars are two small niches ; the one on the proper left is empty, the other still contains a small stone sculpture, about 2 feet in height[1]. (Pl. LXXIX, *fig. f*). The

[1] Yule, *op. cit.*, found the niches and figures exactly as described above. He adds that two figures, one seated and one standing, were lying on the ground ; the one standing, a Śiva, is now at the Pagan Museum (see my Provincial Report for 1913, para. 47, p. 19 and pl. II, *fig.* 1) ; the other is in the Berlin Museum, and is reproduced and carefully described by Grünwedel, *op. cit.* This seated Vishṇu, 4 feet high, which Yule describes as coming from the niche above the capital on the left, is really the central figure below ; it could not have fitted in the smaller niche ; moreover, the counterpart of the figure now missing in this niche, is still *in situ* in the niche over the capital on the right hand, and is only two feet high ; the one on the left was of the same size.

SCULPTURES FROM NATHLAUNG KYAUNG, PAGAN.



a. VARĀHA-AVATĀRA.



b. RĀMACHANDRA-AVATĀRA.



c PARAŚURĀMA-AVATĀRA.



d. NṚISIMHA-AVATĀRA.



e. UNIDENTIFIED.



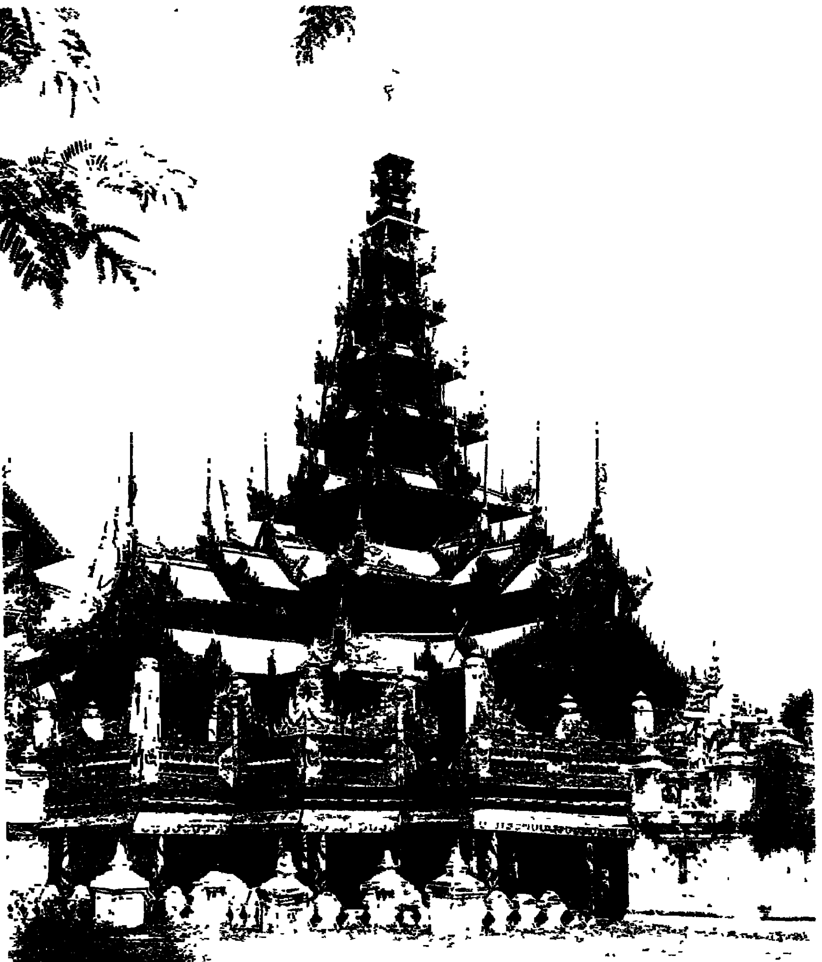
f. BUDDHA-AVATĀRA.

LITHOTYPE BY WALTER GRIGGS, LONDON, W C

SCULPTURES FROM NATHLAUNG KYAUNG, PAGAN.



a. VISHNU



b. KYAUNG-U PYATTHAT OF THE TAIKTAW MONASTERY, MANDALAY.



c. VISHNU.

LITHOTYPE BY WALTER GRIGGS, LONDON W.C.

central figure (Pl. LXXX, *fig. c*), which is now in the Berlin Museum, has been reproduced from a photograph of it given in Grünwedel's *Sculpturen aus Pagan* [1]; it was found lying on the floor of the corridor by Colonel H. Yule. It is Vishṇu, holding the disc, the conch and the club, and seated on a lotus resting on a Garuḍa. The smaller statue over the capital to the right of the larger one (Pl. LXXIX, *fig. f*) is also Vishṇu; it likewise is seated on a lotus resting on a Garuḍa which is rather defaced, but the general form of which is plainly recognisable. The disc is held in the second right hand on a level with the shoulder; the club is also visible in the left arm resting on the knee; the other left arm and the conch cannot be seen; on each of the three wrists is a heavy bracelet, the upper arms are adorned with armlets; the dress is very simple and resembles that of a Buddhist monk, while the head dress is similar to that of Buddha figures. This interesting image is the Buddha Avatāra.

At the entrance of the Pagan Museum now stands the figure of Śiva. It was removed from the Nat-hlaung-kyaung, where Yule saw it lying on the floor beside the large seated statue of Vishṇu described above (see Note 1, p. 138); it was then in a rather bad state, more than half the face and other parts of it missing. The local elders restored it according to their own lights; fortunately, of the attributes only the club was missing, the mallet, the trident and sword being intact. All the other figures in this temple are Vishṇuite, and it is probable that this Śiva was brought therein from some other temple, now vanished, or perhaps simply placed there by some Śaivite traders after the temple had fallen into disuse.

This temple is particularly interesting in that it is the only Hindu temple in Pagan which can be identified as such without the least doubt; if others existed, they have disappeared without leaving any trace behind, or have been so affected by the Buddhist cult as to be past identification; in any case, the chronicles and the epigraphs do not mention any.

The central part or dome of the building was very much dilapidated, the brick work being in every stage of decay. As it was intended only to preserve and not to restore the monument, that part of it was left as it was, being strengthened only by underpinning and made watertight by careful grouting. The *śikhara*, which was also in a bad condition, is ornamented with panels, and the corners are recessed. A large crack in the east face of it was filled up and built flush with the original surface, the summit, which is broken off, being made thoroughly water-tight.

Taiktaw and Sangyaung Monasteries, Mandalay.

A striking feature of Mandalay and the one which impresses most pleasantly the visitor to this fallen capital, is the large number of quaint and splendid wooden monasteries profusely decorated with beautiful carvings, which meet his gaze on every side. They were built under the Burmese *régime* by members of the royal family, when expense was no consideration; but this order of things has changed; the monasteries now built of brick and plaster are commonplace and ugly, and the art of wooden architecture is, under the new conditions, slowly but surely dying away. It is, therefore, important that the finest specimens of Burmese wooden

[1] *Op cit.*

architecture still remaining should be carefully preserved, as far as the fragile and rapidly decaying nature of the material allows.

During the year under report, the *Kyaung-u-pyatthats* of the Taiktaw and the Sangyaung monasteries were repaired. Both these monasteries were built by King Mindon (1853-1878) in 1859; the former was intended for the official residence of the *Thathanabaing*, or supreme head of the Buddhist clergy under the Burmese *régime*, a man of great power and influence; the latter for that of the precepter of King Mindon They were built with the materials obtained by dismantling the palace buildings at Amarapura when removing the capital to Mandalay (1857 A. D); the interior is very heavily guilt, and both interior and exterior are richly decorated with fine carvings.

Monasteries are built on a uniform plan, and have four principal divisions (see Pl. LXXXI) :—

1. *The Kyaung-u-pyatthat*, also called *Pyatthat-saung*; this room (*saung*) is always at the east end of the building; it is the sanctuary or chapel and contains an altar with an image of the Buddha; it is over this chapel that the seven-tiered roof, the *pyatthat*, rears aloft its graceful structure; hence its Burmese name, which means: the room with the prāsāda.
2. The *Samu-saung*. This room, immediately behind the *pyatthat-saung*, is the dwelling room of the abbot; it has a two-tiered roof.
3. Then comes the *Kyaungmagyi*, or main room of the building with a figure of the Buddha in the centre; here live the monks sleeping along its sides; and here it is that religious instruction is imparted. The *pyatthat* over it has three tiers.
4. *Bawga-saung* [1]; this is at the west end of the building, and is used as a store-room.

At the Taiktaw Monastery there are two extra compartments, *We-saung* and *Ye-saung*, one on each side of the Kyaung-magyi. They also are intended for the residence of monks. Round the building is the verandah for the use of the monks, called *singyan* [2] in Burmese.

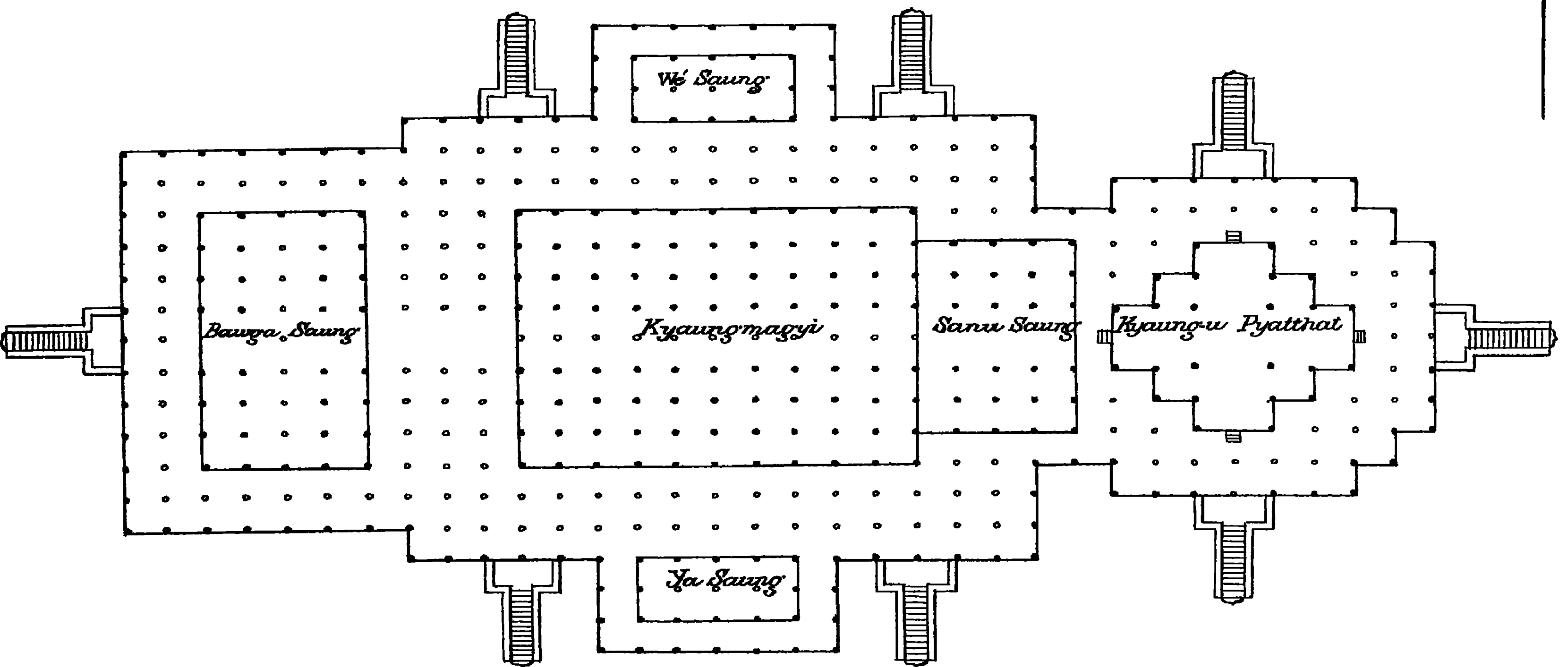
The word pronounced *pyatthat* is written *prassad*, and is a loan-word from the Sanskrit *prāsāda*, a lofty tower, a many-tiered building. Its origin is not to be sought for in Burma but probably in India. One of the earliest references we have to such buildings is found in the Nidānakathā, the preface to the Jātaka,[3] where it is mentioned that three places (*tayo-pāsāde*) were built for young Prince Siddhārtha : one had nine stories, the other seven and the third five.[4] They were known also in Ceylon, where King Duṭṭhagāmanī built, at Anurādha-pura, the great Lohāpāsāda, or Brazen Palace, which had nine stories.[5] These *pyatthats* were already known in Burma in the XIth century A. D. Among the stone carvings in the corridors of the Ānanda Temple (1090 A. D.), the tiered palaces of Prince Siddhārtha referred to above are represented (see figs. *a*, *b* and *c*, Pl.

[1] Pāli: *Bhoga*. [2] From the Sanskrit *chaṅkrama*, a walk, generally covered.

[3] Fausböll's *Jātaka*, Vol. I, 1-94; the Jātaka in its Pāli form was compiled in Ceylon by the Buddhaghosha School in the middle of the 5th century A. D.

[4] "*Ekam navabhūmakaṁ ekaṁ sattabhūmakaṁ ekam pañchabhūmakam.*" [5] Turnour's *Mahāvaṁsa*, p. 161.

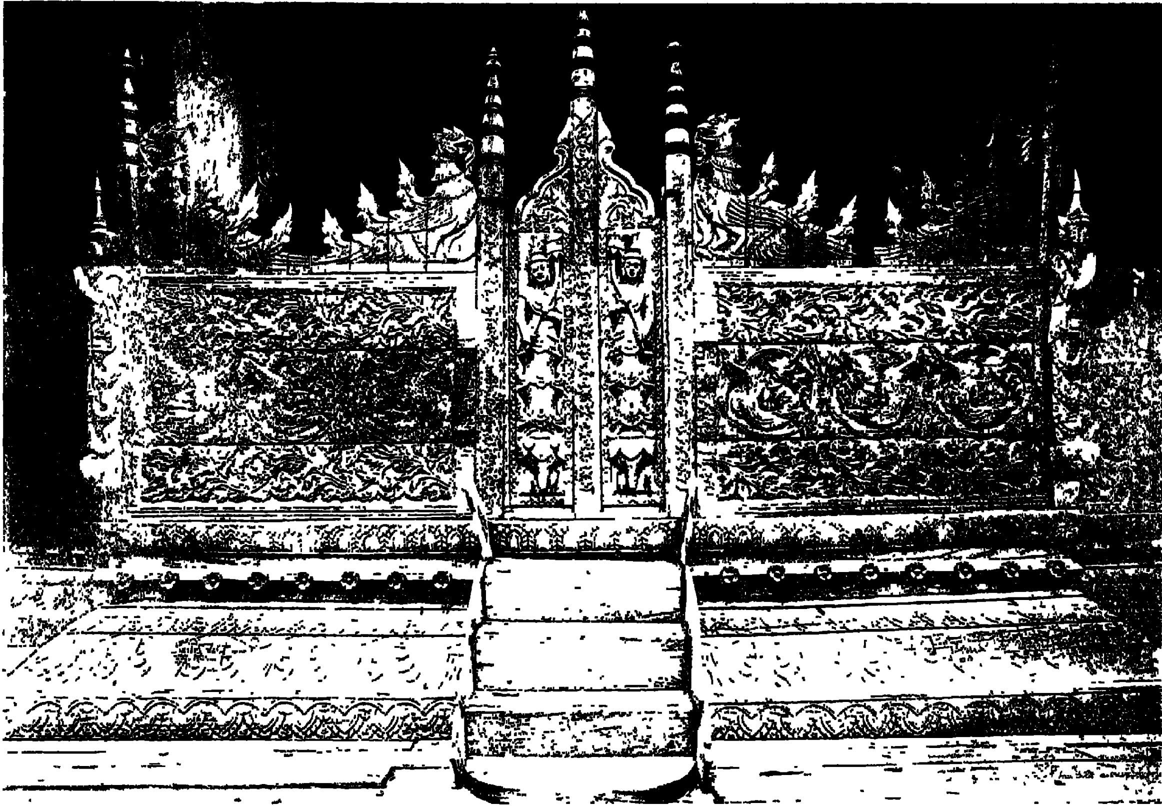




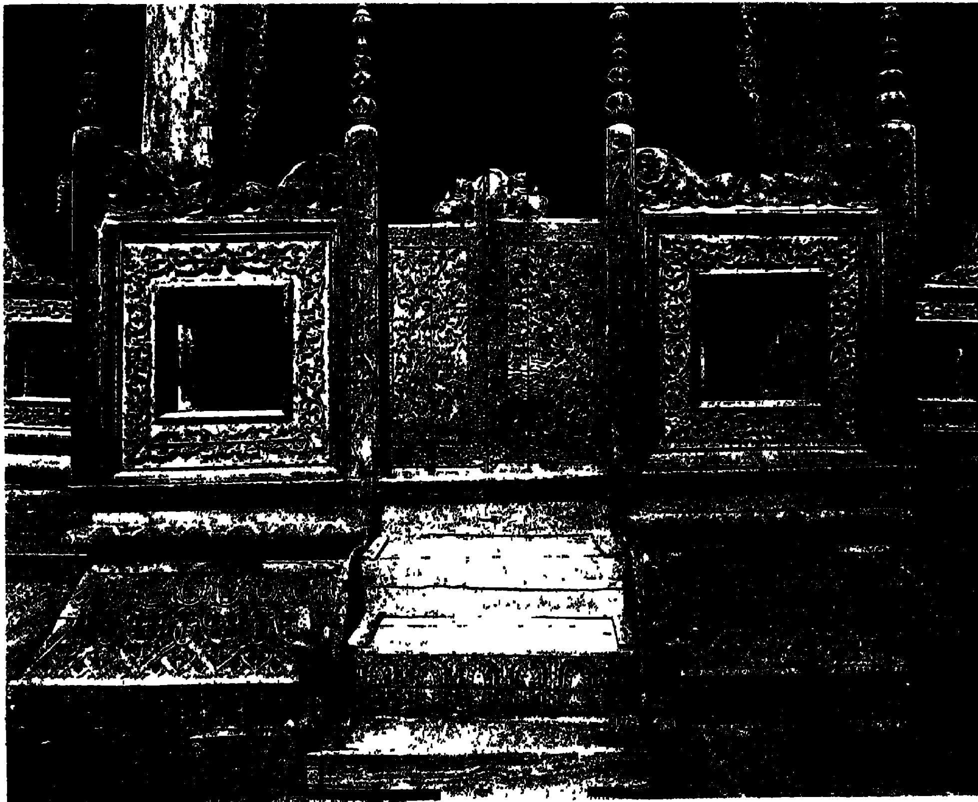


LITHOTYPE BY WALTER GRIGGS LONDON W C

PLAN OF TAIKTAW MONASTRY, MANDALAY.



a. DETAILS SHOWING THE RAILING ROUND THE KYAUNG-U PYATTHAT OF THE TAIKTAW MONASTERY, MANDALAY.



b. DETAILS SHOWING THE RAILING ROUND THE KYAUNG-U PYATTHAT OF THE SANGYAUNG MONASTERY, MANDALAY.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

PLATE LXXXIII.



a. b. & c. STONE SCULPTURES FROM THE ANANDA PAGODA, PAGAN. SHOWING THE PYATTHATS WITH (a) FIVE TIERS (b) SEVEN TIERS AND (c) NINE TIERS.

LITHOTYPE BY WALTER BRIGGS, LONDON, W C

LXXXIII). It will be seen that in these as well as in those erected over monasteries, the structure consists of superposed roofs, square in plan and gradually diminishing in size towards the top.

Plate LXXX, fig. *b*, shows the *Kyaung-u pyatthat* of the Taiktaw Monastery. It is supported by twenty-four pillars, and has seven tiers or roofs, this being the usual number of roofs erected over a chapel containing a Buddha image. The whole structure is surmounted by what the Burmese call the *dubikā*, that is, the *āmalaka* in an elongated form which supports the *kalaśa* over which is placed the *hti*. The inside of the *pyatthat* is hollow, its flooring being raised 3′3″ above that of the whole monastery, which is itself raised 9 feet above the ground level. Access to the floor of the *pyatthat* is gained by four small flights of steps, one at each of the four cardinal points; the facia boards are designed so as to form a pedestal and are ornamented with carvings in low relief (fig. *a*, Pl. LXXXII). These carvings are very simple when compared with those in the same position in the Sangyaung Monastery (fig. *b*, Pl. LXXXII); they are, however, much more elaborate on the panels which form the railing round the *pyatthat* flooring. Between two bands of intricate floral design, are figures of *makaras*, each carrying in its mouth a small leafy branch. Each *makara* is placed in a quatre-foil, and each quatre-foil is looped to the next. Each panel is surmounted by two garuḍas with trailing tails which meet in the middle of the top of the panel, and holding a twig in their beaks. At each corner of the panels is the figure of one of the four Lokapāla *devās* standing on a lotus in the attitude of adoration.

On each panel of the four doors is carved a *deva* standing on a lotus and holding with both hands the stalk of a lotus bud.

Fig. *b*, Plate LXXXII, shows the railing round the *pyatthats* of the Sangyaung Monastery. From the holes left in them, it is probable that the panels were originally ornamented with balusters which have now all disappeared. The carvings on the doors represent scenes in the Jātakas. Those on the door seen in the above figure represent the Naḷapāna Jātaka,[1] in which the Bodhisattva was a monkey-king. He was the head of a troop of eighty thousand monkeys. One day they came to a strange lake, haunted by a water-ogre, who devoured every one that went down to drink of its waters. The clever Bodhisattva and his troop of monkeys sucked up the water through hollow reeds without going down the lake, and thus not one of them fell into the clutches of the ogre. The trees in the panels of the door represent a forest. Below the tree in the panel on the proper left is the representation of the lake, on one side of which is the ogre, and on the other, the Bodhisattva sucking up the water through a reed. Below him are some more figures of monkeys. The door is surmounted by two figures of leogryphs facing each other.

CHAS. DUROISELLE.

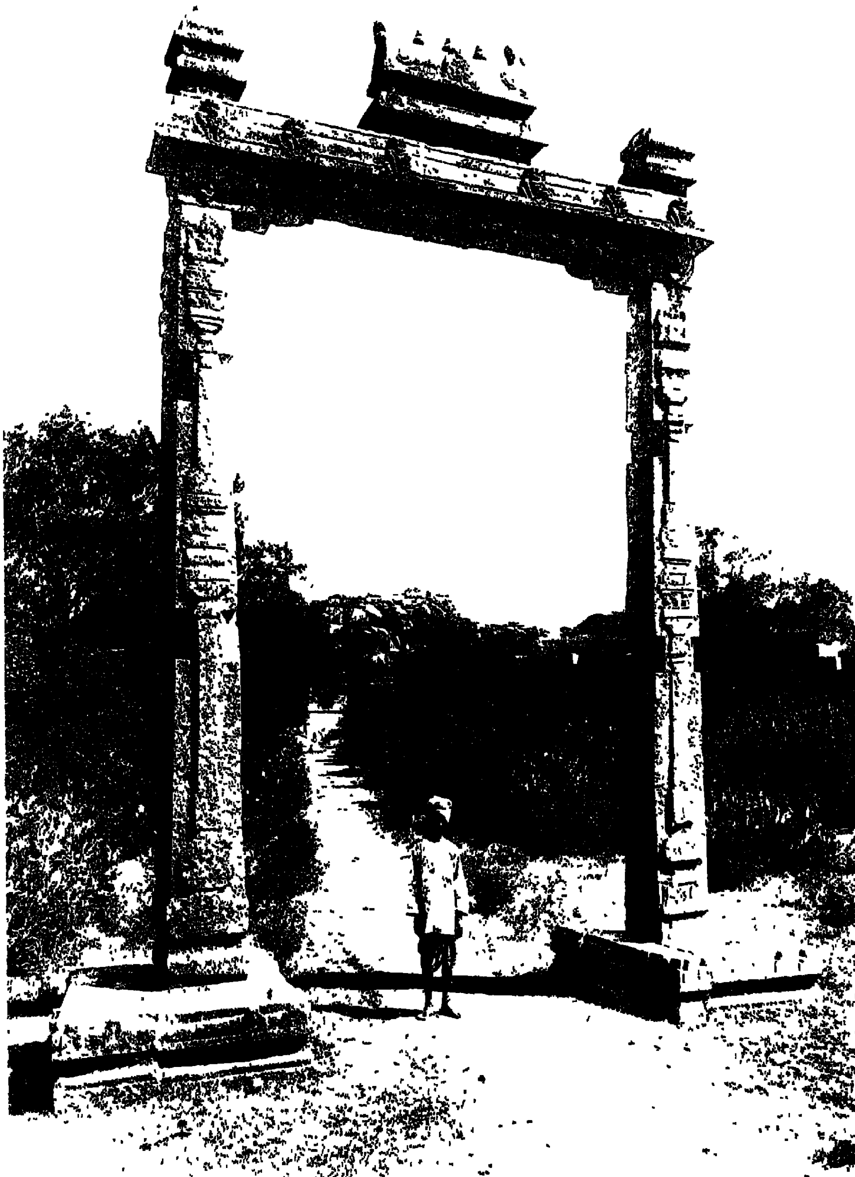
[1] Fausböll's *Jātakas*, Vol. I, p. 170.

THE TULĀPURUSHA-DĀNA MONUMENT AT HAMPI.

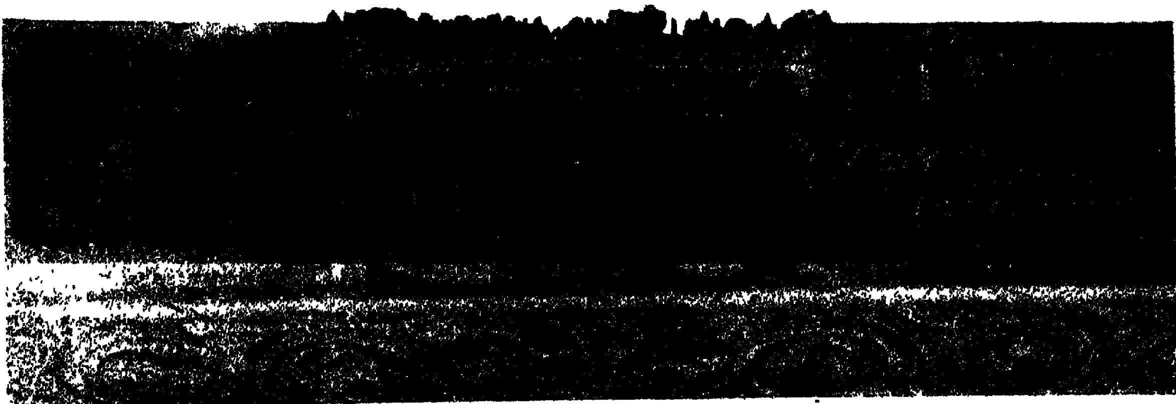
A QUAINT and interesting ancient monument and one which does not appear to have been illustrated before, is the one shown here in Pl. LXXXIV*a*. It is situated at a short distance to the south-west of the famous Viṭṭhala Temple at Hampi in the Bellary District of the Madras Presidency. It has been named the "King's Balance" for the sake of brevity and convenience, but its proper name is the *Tulāpurushadāna* monument, that is, the monument on which the kings on certain special occasions, such as at their coronation, or on the day of a lunar or solar eclipse, or on New Year's Day, performed the curious ceremony of having themselves weighed against their own weight in gold and precious stones which were afterwards distributed among the Brāhmans.

Supported on two lofty granite pillars of elegant appearance, is a massive stone beam or transom designed like the waggon-headed roofs of the temple gateways or *gopurams*. On the underside of the transom are carved three stone rings for the support of the large pair of scales, which were fixed to the beam whenever the ceremony was performed. The monument faces the east, and, on this side, the base of one of the stone pillars is ornamented with a crude sculptural representation of a king and his two wives. Early Indian and Sinhalese kings followed this strange custom on their coronation, and the Vijayanagar sovereigns, too, as we learn from some of their inscriptions, made this gift in accordance with the rules laid down in the *śāstras*. One inscription records that after the capture of the famous Hill Fort at Kondavedu in the Guntur District on the 23rd June, 1515 A. D., Krishna-Rāya, the greatest of all the Vijayanagar sovereigns, in the same year, accompanied by his two wives, Chinnadevī-Amma and Tirumaladevī-Amma, who appear to have accompanied him during his military campaigns visited the temple of Amareśvara near Dharanikota (the historic Dhannyakaṭaka), bestowed there the munificent gifts known as *Tulāpurusha-dāna*, *Ratna-dhēnu*, and *Saptasāgara* and presented some villages to the temple.[1] In all probability, the sculptured representation of a king and his two queens carved on

[1] *A. S. R.*, 1908-09, p. 178.



a. TULĀPURUSHA-DĀNA MONUMENT, HAMPI.



b. SCULPTURE REPRESENTING TULĀPURUSHA-DĀNA CEREMONY. KUMBAKONAM.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

the base of the pillar mentioned above, is intended to represent Krishna-Rāya and his two wives referred to in the inscription. Achyuta-Rāya (1530-1542 A D.), who succeeded Kṛishṇa-Rāya, was most profuse in his gifts to temples and Brahmans. One inscription, which is registered in the Annual Report of the Assistant Superintendent for Epigraphy, [1] records that on one occasion when Achyuta-Rāya performed the *Tulāpurusha-Dāna* ceremony, he "weighed himself against pearls."

During a recent visit to Kumbakonam in the Tanjore District, I was fortunate in discovering the interesting piece of sculpture shown in Pl. LXXXIV, *b*. This sculptural representation of the performance of the *Tulāpurusha-Dāna* ceremony is carved on one of the stone beams supporting the beautifully carved stone ceiling of a handsome little *maṇḍapa* on the north side of the famous Mahāmakham tank at Kumbakonam. For a description of this scene, and the following account of this quaint ceremony, I am indebted to Mr. Krishna Sastri, the Assistant Superintendent for Epigraphy to the Government of Madras. Here, we have a transom supported on two lofty pillars, similar in all respects to the monument at Hampi. From its centre is suspended the fulcrum which holds the rod with the scale pans. The scale pan to the proper right contains the king wearing all his jewelry, holding a sword in one hand and a shield in the other. In the other pan is seen a heap of coins, probably of gold. The image seated in the little pan suspended from the fulcrum represents the god Vāsudeva (Vishṇu), who has to be present to witness the gift according to the rules of the ceremony. Seated on the transom are the gods and goddesses who are invoked and worshipped before the actual weighing begins. Of these deities, the central figure represents Gaṇeśa, the next three to the left being those of Brahmā, Vishṇu, and Śiva. The corresponding figures to the right of Gaṇeśa may represent the lords of the eight regions, the *Lokapālas*. The scene to the proper left of the *toraṇa* (gateway) represents the performance of *Homa* (Fire Oblation), by four Brāhmans, and the male and female figures standing on either side of the balance may be intended to represent the chauri-bearers and attendants of the king.

The above description of the scene is confirmed by the *Dānasāgara*, an early work of about the 11th century of the Christian era. It is here stated "that the ceremony of *Tulāpurusha-Dāna* must be performed on auspicious occasions, such as the day of the equinox, solstices, the end or beginning of a *yuga*, the day of a lunar or solar eclipse, *saṅkrānti*, or new-moon." The places for the ceremony, according to the same authority "must be sacred places of pilgrimage, a temple, a garden, a cow-pen, a house, a forest, or the neighbourhood of a river's bank. The images of Brahmā, Śiva and Achyuta (Vishṇu) must be worshipped. A golden figure representing Vāsudeva must be placed in the centre of the beam. Four Brahmans, versed severally in the four Vedas must be placed in the four different quarters, North, South, East and West respectively. These will perform *homa* to propitiate the lords of the eight regions, the *Lokapālas*. The donor must put on all his ornaments, hold his sword and wear his armour, and sit in the scale looking peacefully at the image of Vāsudeva. After the weighing is over the gold coins are

[1] 1899-1900, page 29.

to be distributed among Brahmans." For, as the same authority states, "a wise man must not keep in his house the money thus allotted, for a long time. He who weighs against his own person in gold and distributes it among Brahmans will extricate his forefathers from ten generations (past and present) and from all misery."

A few years ago, the Mahārāja of Travancore performed the Tulāpurusha-Dāna ceremony; so this quaint old custom still survives in some parts of India, and no doubt the Brahmans would feel sorry to see a custom so advantageous to themselves disappear.

A. H. LONGHURST.

THE CINDER MOUND AT KUDATINI IN THE BELLARY DISTRICT.

ABOUT three miles west of Kudatini,[1] to the north of the pass leading to Toranagallu through the low line of hills here, is a curious mound of cinders the origin of which has given rise to much speculation. It is dome-shaped, some 50 feet in height and about 150 yards in circumference, and is composed of masses of semi-vitrified scorious cinders and layers of ashy earth (Pl. LXXXV *a*). The natives call the spot Būdi-kaṇive ("ash-pass") or Būdiguṇṭa ("ash-hill"), and say that the mound consists of the ashes of an impious giant, called Hidimbāsura, who was slain by Bhīma, one of the five Pāṇḍava brothers. Other popular accounts say that the slain in a great battle were all burnt in one heap here.

Lieutenant Newbold[2] was the first to call attention to the mound and various theories were advanced to account for it. Newbold pointed out that other similar mounds were reported to exist in Mysore, and that in the Bellary district there were two more at the eastern base of the Copper Mountain, west of Halakundi on the Bellary-Hirehālu road. In a later paper [3] he again reverted to the subject and drew attention to another similar mound at Nimbāpuram, north-east of Hampi ruins, and two others immediately south of the Kappagallu Hill near Bellary. Newbold cut into one of the two last, and found that it was not homogeneous throughout, but, like the Kudatini mound, composed of strata or layers of ashy earth, scoria, dark earth, and so forth, and that it rested on a bed of gravel detritus from the surrounding rocks. He made an exhaustive examination of the cinders and showed them to be of animal origin and not due to any manufacturing process. He showed that there is mention in several old Hindu records of women burning themselves in great numbers when their husbands were slain in battle, and inclined finally to the conclusion that the mounds were either the remains of those slain in some such battle, who, perhaps with their wives, had been burnt there, or of the great sacrificial holocausts which the early annals of the

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[1] Kudatini is a village 12 miles west-north-west of Bellary in the Madras Presidency and one mile from the railway station of the same name.

[2] *J. A. S. B*, V, 670 (1836) and *Madras Journ. Lit. and Science*, VII, 130 (1838) The latter gives a sketch of the mound.

[3] *J. R. A. S.* (old series), VII, 137 (1843).

country mention as being occasionally performed to propitiate the gods. Huge burnt sacrifices were in vogue in other countries also. Solomon (2, Chron. VII, 5) once offered up 22,000 oxen and 120,000 sheep on a single occasion.

Many years later Mr. Bruce Foote examined the Kudatini mound. He found [1] in the little gullies washed by the rains in its sides a stone celt and some mealing-stones and corncrushers such as the prehistoric peoples used to make, with numerous bones (mostly bovine) and fragments of pottery. These discoveries led him to connect the mound with the neolithic settlements which are scattered about this district, and inclined him to the theory that it was caused by a holocaust of animals at some religious celebration. Mr. Bruce Foote added to Newbold's list of such mounds another west of Sānavāsapuram (about half-way along the road from Bellary to Siruguppa), and smaller ones on Kurikuppi hill, three miles north-west of Toranagallu, and on the hill, fort and saddle of Kakabālu, both in the Hospet taluk of the Bellary district. In the mound at Sānavāsapuram and in the two at the foot of the Copper Mountain he found more prehistoric implements, comprising stone celts, chisels, mealing-stones and broken pottery. Yet other mounds have since been discovered, but those at Kudatini and Nimbāpuram appear to be the largest at present known.

In a later paper [2] Mr. R. Sewell has suggested other explanations of the occurrence of these mounds. He doubts whether it is sufficiently proved that they are all of them as old as neolithic times. He considers it more probable that at least those at Kudatini and Nimbāpuram are either the remains of persons slain in some of the many battles which took place round about the Vijayanagar capital between the forces of that empire and the Muhammadans (these bodies would naturally have been burnt to prevent pestilence), or that they were caused by wholesale acts of *sati*, which are known to have taken place in those days when kings or other persons of importance died. He points out that most of the mounds occur along the main routes towards Vijayanagar and shows that the descriptions left by Duarte Barbosa and Cæsar Frederic of the place near that city, where the great sacrifices took place, correspond with the position of the Nimbāpuram mound.

In January 1912, I inspected the mound at Kudatini and took the two photographs shown in Pl. LXXXV. The small building on the top of the mound is a modern police-shelter. Like Mr. Bruce Foote, I found a few broken stone celts and the remains of pottery lying about on the surface of the lower portion of the mound, but there was nothing to show that these had fallen out of the mound or that they were in any way connected with it, but rather, that these neolithic remains had been carried down to the base of the mound by the flow of rain water down the slopes of the adjacent hillocks. On cutting a hole into the mound I found it composed of alternate layers of slag-like cinders and ashy earth mixed with small fragments of calcined bone without any trace of implements or pottery of any kind. I then cleared the base line of the mound where it joins the road and found that the mound stood upon a circular raised platform about two feet high composed of mud and gravel forming a kind of inferior concrete (Pl. LXXXV, *b*). This raised

[1] *J. A. S. B.*, LVI, pt. 2, No. 3, 1887. See also *Journ. Anthropolog. Institute*, XVI, 74.
[2] "The Cinder-mounds of Bellary," *J. R. A. S.*, 1899.

THE CINDER MOUND AT KUDATINI, BELLARY DISTRICT.



a GENERAL VIEW OF THE MOUND.



b. BASEMENT OF SAME.

LITHOTYPE BY WALTER GRIGGS, LONDON, W.C.

basement may be seen in the photograph marked B. During the same year, I visited the mound at Nimbāpuram to the north-east of the ruins of the ancient roya city of Vijayanagar popularly known as Hampi ruins. This mound stands in a rice-field surrounded by rocky hillocks and its lower portion was under water when I inspected it. Its surface is covered with rank jungle growth and large trees. In shape, size and composition, it is obvious that originally it was similar in every respect to the mound at Kudatini and its origin and date are probably the same. Personally, I am inclined to agree with Mr. Sewell, and I would assign these two particular mounds to the Vijayanagar period, about the 15th century A. D.

A. H. LONGHURST.

SIR THOMAS ROE'S RESIDENCE AT MĀNDŪ.

ONE of those many interesting little problems connected with the doings of Englishmen in India in early times, the solving of which is always an interesting occupation in one's leisure moments, is the location of Sir Thomas Roe's dwelling in Māṇḍū in Central India. Sir Thomas Roe, it will be remembered, was British Ambassador at the Court of the Great Mug͟hal in the reign of James I, having been entrusted with certain diplomatic negotiations between the two courts.

No one, who has ever visited the out-of-the-way jungle-grown ruins of Māṇḍū, the ancient capital of the K͟haljī kings of Mālwā, can fail to be deeply impressed by the remains of those noble buildings which once pulsated with human life, and were silent witnesses of events as strange as any out of the 'Arabian Nights.' Upon the heels of the ancient Hindū kings of Mālwā came the Muḥammadan invaders, who cleared the hilltop of its older palaces and idolatrous temples. After an occupation of a hundred and thirty years, the conquerors themselves succumbed to superior force, and the province was gathered into the capacious grasp of the Mug͟hal emperors, when its glory passed away. Its deserted buildings became the abode of the owl and the bat, and its jungles were infested by lions and tigers. It was much in this state when the Emperor Jahāngīr took it into his head, when on one of his tours, to spend a monsoon there, and, having sent a pioneer party on ahead, to put as many of the best buildings, as were needed, into proper repair for his use, he himself followed, and on the 6th March 1617, entered the old city.[1] His nobles had to shift for themselves, and occupy whatever old buildings they could lay their hands upon.

With the Court were Sir Thomas Roe and his suite, and, like the rest, he had to join in the general scramble for accommodation, in which, we are told, he was fairly successful. The identification of his lodgings has been, hitherto, an unsolved puzzle to many a visitor to Māṇḍū.

The Reverend Edward Terry, Chaplain to Sir Thomas, has written: "One of those deserted mosques, with some large tomb near it, both vaulted overhead (which shall be after described) were the best places there to be gotten for my Lord

[1] 'Abdul Karīm, who, at an expenditure of three lakhs of rupees, put the buildings at Māṇḍū in repair, was ennobled by Jahāngīr for his work. Almost three hundred years later, an official, who was also instrumental in putting the buildings into repair a second time, was also decorated by his Emperor. Surely history repeats itself.

Ambassador and his company to lodge and be in, we carrying our bedding, and all things appertaining thereto, all necessaries belonging to our kitchen, and everything beside for bodily use, from place to place as we occasionally removed. Here we stayed with the Mogal, from the middle of April 'till the twentieth of September following, and then began our progress with him towards the city of Amadavar Ahmadabad].

"Our abiding place at Mandu was very near one of the sides of that vast wilderness, out of which some of those wild beasts often times in the night came about our habitation, and seldom returned back without a sheep, a goat, or a kid, some of which we always kept about us for our provision. And it was a wonderful great mercy those furious, ravening, and hunger-bit creatures, did not make their prey sometimes, in the dark and silent nights, while we were sleeping, on some of our bodies, the fore part of our dwelling standing upon pillars, and there was nothing in these open distances that had any strength in it to keep them from us.

"One night, early in the evening, there was a great lion, which we saw, came into our yard (though our yard was compassed about with a stone wall that was not low); and my Lord Ambassador having a little white neat shock that ran out barking at him, the lion presently snapt him up, leapt over the wall and away he went."[1]

In *The Embassy of Sir Thomas Roe to India*[2] the Editor writes: "Possibly some future explorer will identify the building in which Roe took up his quarters. It was "on the South side, near the edge of the hill, a course from the Towne," about two miles from the royal headquarters, and on the way from them down to the river; and it consisted of a deserted mosque and tomb, probably both of date anterior to the Mogal conquest, with a courtyard surrounded by a wall not too high for a lion to leap over."

"Hearing that the Emperor was to pass near his lodging on his way to take the air at the Narbada, in accordance with the rule that the masters of all houses near which the king passes must make him a present, Roe took horse to meet the king. He offered the king an Atlas neatly bound, saying he presented the king with the whole world. The king was pleased. In return he praised Roe's lodge, which he had built out of the ruins of the temple and the ancient tomb, and which was one of the best lodges in the camp."[3]

Sir Thomas Roe's party was not a small one, for we are told that it consisted of his secretary, chaplain, cook, twenty-three Englishmen and about sixty native servants.

At my last visit to Māṇḍū, in January 1910, I made a particular point of searching for his residence, and, I think, successfully located it. In this I was helped by Colonel Baker, R.E. From the few references to his abode we learn that it was on the south side of the hill and close to the edge; that it was a *kos* ("course") or two miles from the town and the royal headquarters; that it consisted of a deserted mosque with some large tomb near it, and that Jahāngīr,

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[1] *A voyage to East India*, by Edward Terry, p. 189.

[2] Hakluyt Society. Edited by William Foster, B.A., Vol. II. p. 391, n.

[3] *J. B. B. A. S.*, Vol. XIX, p. 195.

when going to take the air of the Narbadā river passed close to it. This all points, without much doubt, to the vicinity of the Tārāpūr Gate, named after the village of Tārāpūr between it and the Narbadā. From the Tārāpūr Gate a magnificent view of the Narbadā valley is obtained, and the south-west Monsoon winds blow up from it on to the hill. Jahāngīr, probably, merely came the two miles from his palace—the Jahāz maḥall—to enjoy the fresh air at this point. It is not likely that he undertook a sixteen to twenty mile journey down into the plain to the Narbadā itself, or double that by the roundabout way through the Delhi Gate, on the north side of Māṇḍū, as Sir James Campbell thought.[1] The initial mistake of the latter, which led to this misconception, was that he believed that Jahāngīr took up his quarters on the south-east of the hill at Bāz Bahādur's palace. This could not have been the case, and I am quite convinced that it was at the Jahāz Maḥall, near the village, on the north, where there was a group of great buildings more suited to the requirements of Jahāngīr's great family and retinue than what the very small and limited accommodation of Bāz Bahādur's palace afforded.

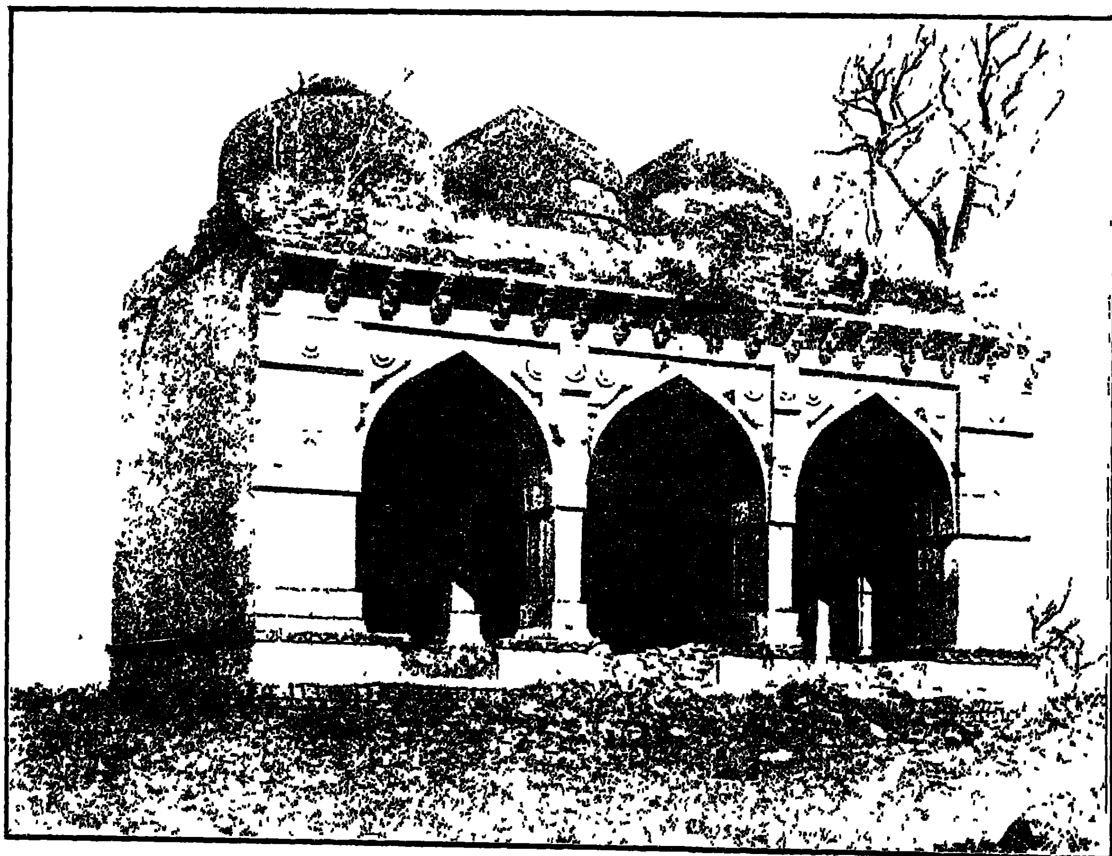


Fig. I.

We found, within a few hundred yards to the north-west of the Tārāpūr Gate, on the west side of a large tank just such a mosque with the ruins of a great tomb in front of it, as indicated by the descriptions given. Around it are the ruined walls of other smaller buildings and outhouses, and the remnants of an enclosing wall still stand. An examination of the three arches in front shews that their

[1] *J. B. B. A. S.*, Vol. XIX, p. 195.

soffits and the sides of the pillars below have been grooved around to take wooden or bamboo trellis screens or something of that kind, a very unusual thing for a mosque, used as such, where the front should never be closed. These grooves, which may be seen in the accompanying photograph (Fig. 1), are not found in the other mosques on the hill. This agrees with what Terry says: "the fore part of our dwelling standing upon pillars, and there was nothing in these open distances [spaces] that had any strength in it to keep them [lions] from us." A frail trellis certainly would not.

The mosque has traces of decoration inside. The tomb, which stood in front of it, is now represented by a great mound of ruins. That it was a tomb cannot be doubted, for the mosques and tombs run in pairs as a rule, and no other building but a tomb would stand out before a mosque, which is always the more important structure to which the mosque is subsidiary. On the north-east side of the tank are two other ruined tombs which, no doubt, were pressed into service at the same time.

These buildings would probably have been identified before had not Sir James Campbell's account been so misleading.

HENRY COUSENS.

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[1] The continued series of reports by A. Cunningham (Director-General of the Archæological Survey of India) which extend over the years 1862-1887 inclusive, are marked (C. S.) in this list.
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(*a*) Madras Presidency—		
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Velur	Ditto . . .	Ditto.
Trichinopoly	Ditto . . .	Ditto.
Srirangam	Ditto . . .	Ditto.
Madura	Ditto . . .	Ditto.
Tanjore	Ditto . . .	Ditto.
Kombakonam	Ditto . . .	Ditto.
Chillambaram	Ditto . . .	Ditto.
Conjeveram	Ditto . . .	Ditto.
Bijanagar	Ditto . . .	Ditto.
(*b*) Bombay Presidency—		
Ahmedabad	Ditto . . .	Ditto.
Poona	Ditto . . .	Ditto.
Karli	Ditto . . .	Ditto.
Ambarnath	Ditto . . .	Ditto.
Elephanta	Ditto . . .	Ditto.
(*c*) Bijapur	Ditto . . .	Ditto.
(*d*) Rajputana —		
Mount Abu	Ditto . . .	Ditto.
Ajmir	Ditto . . .	Ditto.
Jaipur	Ditto . . .	Ditto.
Ulwar	Ditto . . .	Ditto.

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(*c*) Delhi	Ditto . . .	Ditto.
(*d*) Græco-Buddhist sculptures from Yusufzai.	Ditto . . .	Ditto.
(*e*) Great temple to Siva and his consort at Madura.	Ditto . . .	Ditto.
(*f*) Meywar	Ditto . . .	Ditto.
(*g*) Buildings of the Punjab . .	Ditto . . .	Ditto.
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List of photographic negatives belonging to the India Office.	.....	Ditto.
Bower Manuscripts. (N. I. S.)	A. Hœrnle, Principal, Calcutta Madrassah.	Superintendent, Government Printing, Calcutta, 1893-97. Rs. 32-8-0.
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On the Muhammadan Architecture in Gujrat. (N. I. S.)	J. Burgess, late Director-General, Archæological Survey of India.	Eyre & Spottiswoode, London, 1896. Rs. 16.
Châlukyan Architecture, including examples, from the Ballâri District, Madras Presidency. (N. I. S.)	A. Rea, Superintendent, Archæological Survey, Madras.	Government Press, Madras, 1896. Rs. 12.
Ditto. Correction Slip . .	Ditto . . .	Ditto. 1911. Re. 0-0-6.
List of Antiquarian Remains in the Central Provinces and Berâr. (N. I. S.)	H. Cousens, Superintendent, Archæological Survey, Bombay.	Superintendent, Government Printing, Calcutta, 1897. Rs. 5-8-0.
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The Muhammadan Architecture of Ahmedabad, Part I. (N. I. S.)	J. Burgess, late Director-General, Archæological Survey of India.	William Griggs & Sons, Ld., London, 1900. £1-11-6.
Report on results of explorations in the Nepal Tarai, Part I. (N. I. S.)	P. C. Mukherji, lately employed on Archæological explorations under the Government of the North-Western Provinces and Oudh.	Superintendent, Government Printing, Calcutta, 1901. Rs. 6-8-0.
The Jaina stūpa and some other Antiquities of Mathurâ. (N. I.S.)	V. A. Smith, Indian Civil Service.	Government Press, United Provinces 1901. Rs. 14-8-0.
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Antiquities of Chamba State, Part I—Inscriptions of the Pre-Muhammadan period. (N. I. S.)	J. Ph. Vogel, Ph.D., Superintendent in charge of Hindu and Buddhist Monuments, Northern Circle.	Superintendent, Government Printing, Calcutta, 1911. Rs. 22 or 33*s.*
Annual Report of the Director-General of Archæology in India for the year 1902-03, Parts I and II.	J. H. Marshall, Director-General of Archæology in India.	Ditto, 1904. Part II. Rs. 20.
Ditto for the year 1903-04, Parts I and II.	Ditto . . .	Ditto, 1905-06. Re. 0-4-0 and Rs. 32.
Ditto for the year 1904-05, Part I.	Ditto . .	Ditto, 1906. Re. 0-5-0.
Ditto for the year 1904-05, Part II.	Ditto . . .	Ditto, 1908. Rs. 20.
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Ditto for the year 1905-06, Part II.	Ditto . . .	Ditto, 1908. Rs. 20.
Ditto for the year 1906-07, Part I.	Ditto . . .	Superintendent, Government Central Branch Press, Simla, 1908. Re. 0-12-0.
Ditto for the year 1906-07, Part II.	Ditto . . .	Superintendent, Government Printing, Calcutta, 1909. Rs. 25.
Ditto for the year 1907-08, Parts I and II.	Ditto . . .	Ditto. Re. 0-8-0 and Rs. 25 respectively.
Ditto for the year 1908-09, Part I.	Ditto . . .	Ditto, 1911. Re. 0-7-0.
Ditto for the year 1908-09, Part II.	Ditto . . .	Ditto, 1912. Rs. 20 or 30*s.*
Ditto for the year 1909-10, Part I.	J. Ph. Vogel, Ph.D., Officiating Director-General of Archæology in India.	Ditto, 1911. Re. 0-10-0
Ditto for the year 1909-10, Part II.	Ditto . . .	Ditto, 1914. Rs. 15 or 22*s.* 6*d.*

Title of work.	Name and official designation of author.	Press, date of publication and issue price of each volume or of complete work.
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Ditto for the year 1910-11, Part II.	Ditto . .	Ditto, 1914. Rs. 13 or 19*s.* 6*d.*
Ditto for the year 1911-12, Part I.	J. H. Marshall, C.I.E., Litt.D., F.S.A., Director-General of Archæology in India.	Ditto, 1914. Rs. 1-8-0 or 2*s.* 3*d.*
Ditto for the year 1911-12, Part II.	Sir John Marshall, Kt., C.I.E., M.A., Litt.D., F.S.A., Hon. A. R.I B.A., Director-General of Archæology in India.	Ditto, 1915. Rs.
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Notes on the Amaravatī Stūpa .	J. Burgess, Government Archæological Surveyor for Western and Southern India.	Government Press, Madras, 1882. Rs. 7-8-0.
Notes and Inscriptions from Temples in the Madura District, Vol. IV.	Ditto . . .	Ditto, 1885-86.
Tamil and Sanskrit Inscriptions with some notes on village antiquities collected chiefly in the south of the Madras Presidency.	Ditto . . .	Ditto, 1886.
List of ancient monuments for conservation in the Madras Presidency in 1884.	Ditto . . .	Ditto, 1886-87.
Ditto in 1891.	A. Rea, Archæological Surveyor, Madras.	Ditto, 1891. Re. 0-6-0.
Epigraphia Indica and Record of the Archæological Survey of India, Vol. III, 1894-95.	E. Hultzsch, Government Epigraphist.	Superintendent, Government Printing, Calcutta, 1895.
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Ditto Vol. VII, 1902-03	Ditto . . .	Ditto, 1904.
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Ditto „ IX, 1907-08	Drs. E. Hultzsch, Professor in the University of Halle, and Sten Konow, Government Epigraphist for India.	Ditto.
Ditto „ X, 1909-10	Dr. Sten Konow, Government Epigraphist for India.	Ditto.
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List of tombs and monuments of Europeans, etc., in the Madras District.	Government of Madras . .	Government Press, Madras, 1898, Re. 0-12-0.
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Annual Report of the Archæological Survey, Madras and Coorg, for the year 1899-1900.	A. Rea, Superintendent, Archæological Survey.	Ditto, 1900.
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Ditto, for the year 1911-12.	Ditto . .	Ditto, 1912.
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Report on Epigraphical work accomplished from July 1891 to June 1892.	E. Hultzsch, Government Epigraphist.	Ditto, 1892.
Ditto July 1892 to June 1893.	Ditto . .	Ditto, 1893.
Ditto do. 1893 to do. 1894.	Ditto . .	Ditto, 1894.
Ditto do. 1894 to do. 1895.	Ditto . .	Ditto, 1895.
Ditto do. 1895 to do. 1896.	Ditto . .	Ditto, 1896.
Ditto do. 1896 to do. 1897.	Ditto . .	Ditto, 1897.
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The antiquities of the Kolaba Agency. (Ser. 330, Sel. Rec., Bombay, N. S. No. 7.)	......	1854.
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Observations on inscriptions on copper-plates dug up at Naroor, in the Koodal Division of the Sawunt Waree State, 1848; with translations and facsimiles, 1851. (Ser. 350, Sel. Rec., Bombay, N. S. No. 10.)	Major G. LeG. Jacob . .	1855.
Rock-cut Temples of Western India.	J. Fergusson, F.R.S., M.R.A.S.	Cundall & Downes, London, 1864.

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Notes to accompany a series of photographs designed to illustrate the Ancient Architecture of Western India.	Captain Lyon, late of Her Majesty's 68th Regiment of Light Infantry.	Carey Brothers, Old College Street, 3, Geneva, 1871.
Memorandum on the Buddhist Caves at Junnar.	James Burgess, Archæological Surveyor and Reporter to Government, and J. F. Fleet, Bo.C.S.	Government Central Press, Bombay, 1874.
Memorandum on the antiquities at Dabhoi, Ahmedabad, Than, Junagadh, Girnar, and Dhank.	James Burgess, Archæological Surveyor and Reporter to Government.	Ditto, 1875.
Memorandum on the remains at Gumli, Gop, and in Kachh, etc.	Ditto . . .	Ditto.
Provisional lists of Architectural and other Archæological remains in Western India, including the Bombay Presidency, Sindh, Berar, Central Provinces, and Hyderabad.	Ditto . . .	Ditto.
Translations of inscriptions from Belgaum and Kalàdgi Districts in the Report of the first season's operations of the Archæological Survey of Western India and of inscriptions from Kathiawar and Kachh.	J. F. Fleet, Bo.C.S., and Hari Vaman Limaya, B.A.	Ditto, 1876.
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Notes on the antiquities of the Talukas of Parner, Sangamner, Ankole, and Kopergaum forming the charge of the 2nd Assistant Collector, Ahmadnagar, with revised lists of remains in the Ahmadnagar, Nasik, Puna, Thana, and Kaldági Zillahs.	W. F. Sinclair, Bo.C.S., and J.. Burgess, Archæological Surveyor and Reporter to Government.	Ditto, 1877.
Architectural and Archæological remains in Khandesh in 1877.	W. H. Propert, Collector of Khandesh.	Ditto.

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Reports (from the Collectors) regarding the Archæological remains in the Karachi, Haiderabad, and Shikarpur Collectorates in Sindh, with plans of tombs	...	Government Central Press, Bombay, 1876.
Report on the Architectural and Archæological remains in the Province of Kachh, with 5 papers by the late Sir Alex. Burnes. (Selections from the records of the Bombay Government, No. CLII, new series.)	Dalpatram Pranjivan Khakhar.	Ditto. Re. 1-14-0.
Notes on the Buddha Rock-Temples of Ajanta, their paintings and sculptures, and on the paintings of the Bagh Caves, modern Buddha Mythology, etc.	J. Burgess, Archæological Surveyor, Western India.	Ditto.
Inscriptions from the Cave Temples of Western India with descriptive notes, etc.	J. Burgess, Archæological Surveyor, and Bhagwanlal Indraji Pandit.	Ditto, 1881.
Lists of the antiquarian remains in the Bombay Presidency, Sindh and Berâr, with an Appendix of inscriptions from Gujrat.	J. Burgess, Archæological Surveyor and Reporter to Government.	Ditto, 1885.
Scheme for the protection and conservation of ancient buildings in and around the City of Ahmedabad.	A. W. Crawley Boevy, C.S.	Education Society's Press, Bombay, 1886.
List of photographs of ancient buildings and antiquities, Bombay.	...	Superintendent, Government Printing, Calcutta, 1887.
The antiquities of the town of Dabhoi in Gujrat.	James Burgess, LL.D., C.I.E., Director-General of the Archæological Survey of India, and H. Cousens, M.R.A.S., Archæological Surveyor, Western India.	George Waterston & Sons, Edinburgh, 1888.
List of Photographic Negatives of ancient buildings and antiquities of the Bombay Presidency.	H. Cousens, M.R.A.S., Archæological Surveyor, Western India.	Government Central Press, Bombay, 1888.
List of Photographic Negatives of the paintings copied from the Ajanta Caves between 1872 and 1885 at the Government School of Art, Bombay, Supplement to the Bombay List of Photographic Negatives.	James Burgess	Superintendent, Government Printing, Calcutta, 1889.

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Bijapur Guide	H. Cousens, M.R.A.S., Archæological Surveyor, Western India.	Orphanage Press, Poona, 1889.
Notes on the buildings and other antiquarian remains at Bijapur, with translations of the inscriptions.	H. Cousens, Archæological Surveyor, Western India, and E. Rehatsek.	Government Central Press, Bombay, 1890.
An account of the Caves at Nadsur and Karsambla.	H. Cousens, Archæological Surveyor, Western India.	Ditto, 1891. Re. 0-10-0.
Progress Report of the Archæological Survey of Western India for the months of December 1889 to April 1890.	Ditto . . .	Ditto, 1890.
Ditto for the months of May 1890 to April 1891.	Ditto . . .	Ditto, 1891.
Ditto for the months of May 1891 to April 1892.	Ditto . . .	Ditto, 1892.
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Ditto for the year ending 30th June 1903.	Ditto . . .	Ditto, 1903.

Title of work.	Name and official designation of author.	Press, date of publication and issue price of each volume or of complete work.
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Ditto for the year ending 30th June 1905.	Ditto . . .	Ditto, 1905. Re. 0-10-0.
Progress Report of the Archæological Survey of India, Western Circle, for the months of July 1905 to March 1906, inclusive.	Ditto . . .	Ditto, 1906. Re. 1-0-0.
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Ditto for the year ending 31st March 1910.	Ditto . . .	Ditto, 1910. Re. 0-10-0.
Ditto for the year ending 31st March 1911.	A. H. Longhurst, Superintendent, Archæological Survey, Western Circle.	Ditto, 1911. Re. 0-8-0.
Ditto for the year ending 31st March 1912.	D. R. Bhandarkar, Superintendent, Archæological Survey, Western Circle.	Ditto, 1912.
Ditto for the year ending 31st March 1913.	Ditto . . .	Ditto, 1913.
Paintings in the Buddhist Cave-Temples of Ajanta, Khandesh, India. Volume I (Pictorial subjects).	John Griffiths, late Principal of the Sir Jamshedji Jijibhai School of Art, Bombay, Fellow of the University of Bombay, Member of the Bombay Branch of the Royal Asiatic Society.	W. Griggs, London, 1896.
Ditto ditto, Volume II (Decorative details).	Ditto . . .	Ditto, 1900.
List of statues and busts in the Town and Island of Bombay.	Government of Bombay .	Government Central Press, 1911. Re. 0-8-0.
Revised list of Tombs and monuments of Historical or Archæological interest in Bombay and other parts of the Presidency.	Ditto . .	Ditto, 1912. Re. 1-6-0.

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BENGAL—		
Account of a visit to Mount Parisnath (in Chutia Nagpoor) and the Jain Temples thereon in 1827. (Ser. 250, Sel. Rec., Bengal, No. 38.)	A. P.	1861.
Ruins of the Nalanda Monasteries at Burgaon, Sub-Division Bihar, District Patna.	A. M. Broadley, B.C.S. .	Bengal Secretariat Press, Calcutta, 1872.
Report on the Archæology of the District of Midnapore.	H. L. Harrison, B.C.S. .	Ditto, 1873.
Buddha Gaya, the Hermitage of Sákya Muni.	Rajendralála Mitra, LL.D., C.I.E.	Ditto, 1878.
List of objects of antiquarian interest in Bengal.	....	Ditto, 1879.
A List of the objects of antiquarian interest in the Lower Provinces of Bengal (with historical descriptions).	......	Ditto, 1879. Not for sale.
Revised list of ancient monuments in Bengal, 1886.	Government of Bengal, P. W. Department, assisted by J. D. Beglar and W. B. B.	Ditto, 1887.
Some Historical and Ethnical aspects of the Burdwan District.	W. B. Oldham, C.I.E., Indian Civil Service.	Ditto, 1891. Not for sale.
Discovery of the exact site of Asoka's classic Capital of Pâtaliputra, the *Palibothra* of the Greeks, and description of the superficial remains.	L. A. Waddell, M.B. .	Ditto, 1892. Re. 1.
A Brief History of Bodh Gaya Math, District Gaya.	Rai Ram Anugrah Narayan Singh Bahadur.	Ditto, 1893. As. 8.
Gazetteer of Sikhim	With an introduction by H. H. Risley, C.I.E., Indian Civil Service.	Ditto, 1894. Rs. 8.
Some Historical and Ethnical aspects of the Burdwan District with an explanatory Index (Reprint).	W. B. Oldham, C I.E., Indian Civil Service.	Ditto, 1894.
List of Statues, Monuments, and Busts in Calcutta of historical interest.	......	Ditto, 1902. Not for sale.
List of Inscriptions on tombs or monuments possessing historical or archæological interest.	C. R. Wilson, M.A., of the Bengal Educational Service.	Superintendent, Government Printing, Calcutta, 1896.

Title of work.	Name and official designation of author.	Press, date of publication and issue price of each volume or of complete work.
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List of Ancient Monuments in Bengal—Revised and corrected up to 31st August 1895.	.. ...	Bengal Secretariat Press, Calcutta, 1896, Rs. 10.
List of ancient monuments—		
Dacca Division . . .	.... .	Ditto Re. 1.
Rajshahi Division . . .	......	Ditto. „ 1.
Orissa Division . . .	......	Ditto. Rs. 1-8-0.
Chota Nagpur Division . .	.....	Ditto. Re. 1.
Bhagalpur Division . .	......	Ditto. Rs. 1-4-0.
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Burdwan Division . . .	... .	Ditto. „ 1.
Patna Division . . .	......	Ditto. Rs. 4.
Presidency Division . .	......	Ditto. „ 2.
Report with photographs of the repairs executed to some of the principal temples at Bhūbānēsvār and caves in the Khāndāgīrī and Udaigiri Hills, Orissa, between 1898 and 1903.	M. H. Arnott, M.Inst.C.E., Executive Engineer, Bengal Public Works.	Waterlow & Sons, Limited, London, W., 1903. Rs. 10-9-0.
Report on the excavations at Pataliputra.	Lt.-Col. L. A. Waddel .	Superintendent, Government Printing, Calcutta, 1903, Rs. 3-8-0.
Annual Report of the Archæological Survey, Bengal Circle, for the year 1900-01.	T. Bloch, Archæological Surveyor, Bengal Circle.	Bengal Secretariat Press, Calcutta, 1901.
Ditto for the year ended April 1902.	Ditto . . .	Ditto, 1902.
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Ditto for the year ended April 1904.	Ditto . . .	Ditto, 1904.
Ditto for the year ended April 1905.	Ditto . . .	Ditto, 1905.
Annual Report of the Archæological Survey, Eastern Circle, for 1905-06.	Ditto . . .	Ditto, 1906. Not for sale.

Title of work.	Name and official designation of author.	Press, date of publication and issue price of each volume or of complete work.
BENGAL—*concld.*		
Annual Report of the Archæological Survey, Eastern Circle, for 1906-07	A. H Longhurst, Officiating Superintendent, Archæological Survey, Eastern Circle.	Bengal Secretariat Press, Calcutta, 1907. Not for sale.
Ditto for 1907-08 . . .	T. Bloch, Superintendent, Archæological Survey, Eastern Circle.	Ditto, 1908. Not for sale.
Ditto for 1908-09 . . .	Ditto . . .	Ditto, 1909. Not for sale.
Ditto for 1909-10 . . .	A. H. Longhurst, Officiating Superintendent, Archæological Survey, Eastern Circle.	Ditto, 1910. Not for sale.
Ditto for 1910-11 . . .	D. B Spooner, Superintendent, Archæological Survey, Eastern Circle.	Ditto, 1911, Re. 0-12-0.
Ditto for 1911-12 . . .	Ditto . . .	Ditto, 1912.
Ditto for 1912-13 . . .	Ditto . . .	Ditto, 1913.
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Description of the antiquities at Kalinjar.	F. Maisey . . .	Baptist Mission Press, 1848.
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Progress Report of the Epigraphical and Architectural Branches of the North-Western Provinces and Oudh from October 1889 till 30th June 1891.	Ditto . . .	Government Press, North-Western Provinces and Oudh, 1892.
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Ditto for the year ending June 1893.	Ditto . . .	Ditto, 1893.
Ditto for the year ending June 1894.	Ditto . .	Ditto, 1894.
Ditto for the year ending June 1895.	Ditto . . .	Ditto, 1895.
Ditto for the year ending June 1896.	Ditto . . .	Ditto, 1896.

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Ditto for the year ending June 1899.	V. A. Smith, I.C.S., and E. W. Smith, Archæological Surveyor.	Government Press, North-Western Provinces and Oudh, 1899.
Ditto for the year ending 31st March 1900.	E W. Smith, Archæological Surveyor	Ditto, 1900.
Ditto for the year ending 31st March 1901.	Ditto . . .	Ditto, 1901.
Annual Progress Report of the Archæological Survey Circle, United Provinces, for the year ending 31st March 1902.	......	Government Press, United Provinces, 1902.
Ditto for the year ending 31st March 1903.	E. B. S. Shepherd, Archæological Surveyor.	Ditto, 1903.
Annual Progress Report of the Archæological Surveyor, United Provinces and Punjab, for the year ending 31st March 1904.	W. H. Nicholls, Archæological Surveyor.	Ditto, 1904.
Ditto for the year ending 31st March 1905.	Ditto . . .	Ditto, 1905.
Annual Progress Report of the Archæological Surveyor, Northern Circle, for the year ending 31st March 1906.	Ditto . . .	Ditto, 1906.
Ditto for the year ending 31st March 1907.	Ditto . . .	Ditto, 1907.
Ditto for the year ending 31st March 1908.	R. F. Tucker, Archæological Surveyor.	Ditto, 1908.
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Ditto for the year ending 31st March 1910.	......	Ditto, 1910.

Title of work.	Name and official designation of author.	Press, date of publication and issue price of each volume or of complete work.
UNITED PROVINCES—*concld.*		
Annual Progress Report of the Archæological Surveyor, Northern Circle, for the year ending 31st March 1911.	G. Sanderson, Superintendent, in charge of Muhamedan and British Monuments, Northern Circle.	Government Press, United Provinces, 1911.
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List of Christian tombs and monuments of archæological and historical interest and their inscriptions in the North-Western Provinces and Oudh.	A. Führer, Archæological Surveyor, North-Western Provinces and Oudh.	Government Press, North-Western Provinces and Oudh, 1896. Rs. 6.
The remains near Kasia in the Gorakhpur District.	V. A. Smith, I.C.S. . .	Ditto, Re. 1.
Portfolio of Indian Architectural drawings, Part I.	E. W. Smith, Archæological Surveyor, North-Western Provinces and Oudh.	Griggs & Sons, London, Rs. 9.
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Plates illustrating the Report on the antiquities in the district of Lalitpur, North-Western Provinces.	Ditto . . .	Ditto.
PUNJAB—		
Objects of antiquarian interest in the Punjab and its dependencies compiled from statements furnished by the several Deputy Commissioners, His Highness the Maharaja of Kashmir, and the Superintendents, Cis-Sutlej, Bahawalpur, and Chamba States.	......	Public Works Department Press, Lahore, 1875.
Descriptive List of the Principal Buddhist Sculptures in the Lahore Museum	A. Cunningham, Director-General, Archæological Survey.	.. ...
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Title of work.	Name and official designation of author.	Press, date of publication and issue price of each volume or of complete work.
PUNJAB—*contd.*		
List of inscriptions in the Lahore Museum.	Dr. M. A. Stein . .	1899.
Revised list of objects of Archæological interest in the Punjab.	C. J. Rodgers, Archæological Surveyor.	Baptist Mission Press, Calcutta.
Report of the Archæological Survey, Punjab Circle, for the period from 1st January to 30th June 1901.	Ditto . . .	Ditto, 1901.
Annual Progress Report of the Archæological Surveyor, Punjab Circle, for the year ending 31st March 1902.	Dr. J. Ph. Vogel, Archæological Surveyor, Punjab.	Lahore, Caxton Printing Works, 1902.
Ditto for the year ending 31st March 1903.	Ditto . . .	Ditto, 1903.
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Ditto for the year ending 31st March 1905.	Ditto . . .	Economical Press, Lahore, 1905. Re. 1.
Annual Progress Report of the Superintendent of the Archæological Survey, Northern Circle, for the year ending 31st March 1906.	Ditto . . .	Ditto, 1906. Re. 1.
Ditto for the year ending 31st March 1907.	Ditto . . .	Ditto, 1907. Re. 1.
Ditto for the year ending 31st March 1908.	Ditto . . .	Ditto, 1908. Re. 1.
Ditto for the year ending 31st March 1909.	A. H. Longhurst, Esq., Offg. Superintendent, Archæological Survey.	Ditto, 1909.
Ditto for the year ending 31st March 1910.	Dr. J. Ph. Vogel, Superintendent, Archæological Survey.	Ditto, 1910. Re. 1.
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Ditto for the year ending 31st March 1912.	Ditto . . .	Ditto, 1912. Re. 1.

Title of work.	Name and official designation of author.	Press, date of publication and issue price of each volume or of complete work.
PUNJAB—*concld.*		
Annual Progress Report of the Superintendent of the Archæological Survey, Northern Circle, for the year ending 31st March 1913.	H. Hargreaves, Offg. Superintendent, Hindu and Buddhist Monuments, Northern Circle.	Economical Press, Lahore, 1913. Annas 7 only.
N.-W. F. PROVINCE—		
Report on the explorations of the Buddhist ruins at Jamalgarhi during the months of March and April 1873. (Supplement to the Punjab Government Gazette of 12th February 1874.)	Lieut. A. Crompton, R.E.	1874.
Report on the explorations of the Buddhist ruins near Kharkai during the months of March and April 1874. (Supplement to the Punjab Government Gazette of 11th June 1874.)	Lieut. Skene Grant, R.E.	1874.
Report on the exploration of the Buddhist ruins at Takht-i-Bai Yusafzai, during the months of January, February, March and April 1871. (Supplement to the Punjab Government Gazette of 6th August 1874.)	Sergeant F. H. Wilcher, R.E.	1874.
Report on the explorations at mound Shahji-ki-dheri near Peshawar. (Supplement to the Punjab Government Gazette of 18th November 1875.)	Lieut. C. A. Crompton, R.E.	1875.
Report on the explorations at Taikal near Peshawar. (Supplement to the Punjab Government Gazette of 18th November 1875 and of 30th March 1876.)	Lieut. P. Haslett, R.E.	1876.
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Memorandum on excavations at Sikri, Yusafzai.	Capt. H. A. Deane, Assistant Commissioner.	Punjab Government Press, Lahore, 1889.
Detailed report of an Archæological tour with the Buner Field Force.	Dr. M. A. Stein, Principal, Oriental College, Lahore.	Ditto, 1898.
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Title of work.	Name and official designation of author.	Press, date of publication and issue price of each volume or of complete work.
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Annual report of the Archæological Survey of India, Frontier Circle, for 1906-07.	Dr. D. B. Spooner, Superintendent, Archæological Survey, Frontier Circle.	Government Press, North-West Frontier Province, 1907. Re. 0-4-0.
Ditto for 1907-08 . . .	Ditto . .	Commercial Press, Peshawar, 1908. Re. 0-3-6.
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Ditto for 1909-10 . . .	Ditto . . .	Ditto, 1910. Re. 0-10-0.
Ditto for 1910-11 . . .	H. Hargreaves, Officiating Superintendent, Archæological Survey, Frontier Circle.	Ditto, 1911. Re. 0-9-0.
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Ditto for 1912-13 . . .	Khan Sahib Mian Wasi-ud-Din, Officer-in-charge of the current duties of the Superintendent, Archæological Survey, Frontier Circle.	Ditto, 1913. Annas 3 only.
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List of objects of antiquarian interest in British Burma.	Dr. E. Forchhammer, Government Archæologist, Burma.	Government Press, Burma, 1880. Re. 1.
Notes on the early History and Geography of British Burma—		
I. The Shwe Dagon Pagoda .	Ditto . . .	Ditto, 1883.
II. The first Buddhist Mission to Suvarnabhumi.	Ditto . . .	Ditto, 1884.
List of objects of antiquarian and Archæological interest in British Burma.	Ditto . . .	Ditto, Re. 1.
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Title of work.	Name and official designation of author.	Press, date of publication and issue price of each volume or of complete work.
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List of objects of antiquarian interest in Arakan.	Dr. E. Forchhammer, Government Archæologist, Burma.	Government Press, Burma, 1881.
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Report on the Antiquities of Arakan.	Dr. E. Forchhammer, Government Archæologist, Burma.	Ditto.
Report on the Kyaukku Temple at Pagan.	Ditto . . .	Ditto.
The Kalyani Inscriptions . .	Taw Sein Ko, Government Translator, Burma.	Ditto. Re. 1.
Memorandum of a tour in parts of the Amherst, Shwegyin, and Pegu Districts.	Ditto . .	Ditto, 1897. Re. 0-4-0.
Note on a tour in Burma in March and April 1892.	F. O. Oertel, Assistant Engineer on special duty, Public Works Department, North-Western Provinces and Oudh.	Ditto, 1893.
Notes on an Archæological tour through Ramannadesa. (The Talaing country of Burma.)	Taw Sein Ko, Government Translator, Burma.	Reprinted from the *Indian Antiquary* by the Educational Society's Steam Press, Bombay, 1893.
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Notes on antiquities in Ramannadesa. (The Talaing country of Burma).	Lieutenant-Colonel R. C. Temple, late President, Rangoon Municipality, Burma.	Ditto, 1894.
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Inscriptions collected in Upper Burma.	Taw Sein Ko, Government Archæologist, Burma.	Ditto, 1900—1903. Rs. 12-4-0.
Index, Inscriptionum B. Birmanicarum, Vol. I.	Ditto . . .	Ditto, 1900. Re. 0-3-0.
List of objects of antiquarian and archæological interest in Upper Burma.	Ditto . . .	Ditto, 1900. Re. 0-8-0.
List of Pagodas at Pagan under the custody of Government.	Ditto . . .	Ditto. Re. 1.
Catalogue of exhibits in the Pagan and Mandalay Museums.	Taw Sein Ko, Superintendent, Archæological Survey, Burma.	Ditto, 1906. Re. 0-6-0.
Catalogue of Coins in the Phayre Provincial Museum, Rangoon.	Ditto . . .	Ditto, 1909. Re. 0-4-0.
List of Ancient Monuments in Burma. I.—Mandalay Division.	Ditto . . .	Ditto, 1910. Re. 0-4-0.
Report on Archæological work in Burma for the year 1901-02.	Ditto . . .	Ditto, 1902. Re. 0-2-0.
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Title of work.	Name and official designation of author.	Press, date of publication and issue price of each volume or of complete work
BURMA—*concld.*		
Report of the Superintendent, Archæological Survey, Burma, for the year ending 31st March 1911.	Taw Sein Ko, Superintendent, Archæological Survey, Burma.	Government Press, Burma, 1911. Re. 0-8-0.
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Ditto, for the year ending 31st March 1913.	Chas. Duroiselle, Offg. Superintendent, Archæological Survey, Burma.	Ditto, 1913.
MYSORE AND COORG—		
Mysore Inscriptions . . .	L. Rice, Director of Public Instruction.	Mysore Government Press, 1879. Rs. 6.
Epigraphia Carnatica—		
Vol. I. Coorg Inscriptions . .	L. Rice, Secretary to Government.	Ditto, 1886. Rs. 2-8-0.
„ II. Inscriptions at Sravana Belgola, a chief seat of the Jains (Mysore).	L. Rice, Director of Archæological Researches and Secretary to Government, Mysore.	Ditto, 1889. Rs. 12.
„ III. Inscriptions in the Mysore District, Part I.	Ditto . .	Ditto, 1894. Rs. 12.
„ IV. Ditto, Part II . .	Ditto . .	Ditto, 1898. Rs. 10.
„ V. Inscriptions in the Hassan District in two sections.	L. Rice, Director of Archæological Researches.	Basel Mission Press, Mangalore, 1902. Rs. 20.
„ VI. Inscriptions in the Kadur District.	Ditto . .	Ditto, 1901. Rs. 8.
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„ VIII. Ditto, Part II, in two sections.	Ditto . .	Ditto, 1904. Rs. 14.
„ IX. Inscriptions in the Bangalore District.	Ditto . .	Ditto, 1905. Rs. 12-8.
„ X. Inscriptions in the Kolar District, in two sections.	Ditto . .	Basel Mission Press, 1905. Rs. 14.
„ XI. Inscriptions in the Chitaldrug district.	Ditto . .	Ditto, 1903. Rs. 9.
„ XII. Inscriptions in the Tumkur District.	Ditto . .	Ditto, 1904. Rs. 9.

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MYSORE AND COORG—*concld.*		
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Report on the progress of historical research in Assam.	E. A. Gait, I.C.S., Honorary Director of Ethnography in Assam.	Assam Secretariat Printing Office, Shillong, 1897. Re. 1.
List of archæological remains in the Province of Assam.	......	Ditto, 1902.
Report on an archæological tour in Assam in January and February 1905.	T. Bloch, Ph.D., Archæological Surveyor, Bengal Circle.	Ditto, 1905.

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American Oriental Society, 235, Bishop Street, New Haven, Conn., U. S. A.

Smithsonian Institution, Washington, D. C., U. S.

Secretary, National Museum, Washington, U. S. A.

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British Colonies.

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